CONVOTHERM

OES OEB OGS OGB

easyTOUCH

ENG Installation manual

Table of Contents

1 General information 5

Identifying your combi steamer 6
About this installation manual 7

2 Design and function 9

Intended use of your combi steamer 10
Design and function of the combi steamer 11

3 For your Safety 14

Basic safety code 15
Warning signs on the combi steamer 16
Hazards and safety precautions 18
Safety devices 19
Requirements to be met by personnel, working positions 21

4 Conveying and setting up the appliance 22

Dimensions, summary 23
Requirements for the installation location 24
Taking to the installation location 27
Unpacking 29
Setting up the appliance 31

5 Connecting up the combi steamer 33

Electrical installation 34
Energy optimization system 36
Water intake 37
Water drain 40
Gas installation to a fixed connection on OGS/OGB appliances 44
Gas installation for liquid gas bottles on OGS/OGB appliances 47
Flue gas removal system for OGS/OGB appliances 51
Safety precautions for gas appliances 54
Approvals 55

6 Preparing for use 56

Procedure for preparing the appliance for use 57
Taking out of service and disposal 59

7 Optional equipment 60

CONVOClean automatic interior oven cleaning system 61
Ship model 64
Grill version 65
Stacking kit 67
Communications interface 68
Extractor hood/condensation hood 69

8 Technical data, dimensional drawings and connection diagrams 70

8.1 Technical data 71
Technical data for OEB 72
Technical data for OES 76
Technical data for OGS 80
Technical data for OGB 84
Technical data for accessories 89
8.2 Dimensions, dimensional drawings and connection diagrams 90
Dimensions, summary 91
OES/OEB 6.10 92
OES/OEB 6.20 93
OES/OEB 10.10 94
OES/OEB 10.20 95
OES/OEB 12.20 96
OES/OEB 20.10 97
OES/OEB 20.20 98
OGS 6.10 99
OGS 6.20 100
OGS 10.10 101
OGS 10.20 102
OGS 12.20 103
OGS 20.10 104
OGS 20.20 105
OGB 6.10 106
OGB 6.20 107
OGB 10.10 108
OGB 10.20 109
OGB 12.20 110
OGB 20.10 111
OGB 20.20 112

9 Checklists and completion of installation 113

Checklist: installation 114
Checklist: Safety devices and warnings 117
Checklist: Customer guidance and instruction - safety 118
Checklist: Customer guidance and instruction - operation and maintenance 123
Completion of the installation 124

1 General information

Purpose of this chapter

This chapter shows you how to identify your combi steamer and provides guidance on using this manual.

Contents

This chapter includes the following topics:

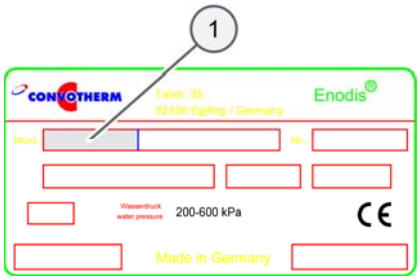
	Page
Identifying your combi steamer	6
About this installation manual	7

Identifying your combi steamer

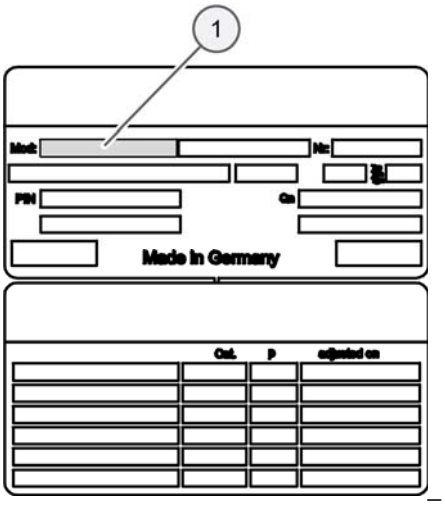
Position and layout of the type plate

You can use the type plate to identify your combi steamer. The type plate is located on the left-hand side of the combi steamer.

The type plate has the following layout on electric appliances:



The type plate has the following layout on gas appliances:



On both type plates, the code making up the trade name (1) identifies your appliance:

Elements of the trade name	Meaning
Letters	
1. letter	O = Eco (always present)
2. letter	E = Electric appliance
	G = Gas appliance
3. letter	B = Appliance with steam generator
	S = Appliance with injection
Numerical values	
xx.yy	Appliance size

About this installation manual

Purpose

This installation manual provides answers to the following questions:
- How do I set up the combi steamer?
- How do I connect up the combi steamer?
- How do I prepare the combi steamer for use?

The aim of this installation manual is to show you how to perform the following tasks:
- Setting up the appliance.
- Connecting the appliance to the electrical supply.
- Connecting the appliance to the water supply.
- Connecting the appliance to the gas supply.
- Connecting the appliance to the flue gas installation.
- Preparing the appliance for use.

Who should read this manual

This installation manual is aimed at the following groups:

Staff qualifications	Tasks	Personal protective equipment required	Chapter to read before task
Equipment mover	▪ Conveying within the establishment	Trained in the use of a pallet truck and forklift truck	**For your Safety** on page 14 **Conveying and setting up the appliance** on page 22
Service Engineer: ▪ Is an authorized customer service engineer. ▪ Has relevant technical training. ▪ Is trained in the particular appliance.	▪ Setting up the appliance ▪ Connecting the appliance ▪ Preparing the appliance for use ▪ Instructing the user	Personal protective equipment as specified by national regulations for the given activity	**Design and function** on page 9 **For your Safety** on page 14 **Conveying and setting up the appliance** on page 22 **Connecting up the combi steamer** on page 33 **Preparing for use** on page 56 **Optional equipment** on page 60
Gas fitter: ▪ Is a gas fitter authorized by the gas supply company. ▪ Has relevant professional training.	▪ Connecting the appliance: gas	Personal protective equipment as specified by national regulations for the given activity	**Design and function** on page 9 **For your Safety** on page 14 **Connecting up the combi steamer** on page 33
Electrician: ▪ Is an authorized customer service engineer. ▪ Has relevant professional training. ▪ Is a qualified electrician.	▪ Connecting the appliance: electric	Personal protective equipment as specified by national regulations for the given activity	**Design and function** on page 9 **For your Safety** on page 14 **Connecting up the combi steamer** on page 33

Documents included in the Customer documentation

The customer documentation for the combi steamer includes the following documents:
- Installation manual (this document)
- User manual
- Help facility included in the software (extracts from the user manual)

Chapters in the installation manual

The table below lists the chapters in this manual, summarizing their content, purpose and target group:

Step	Action
General information	▪ Shows you how to identify your combi steamer. ▪ Provides guidance on using this installation manual.
Design and function	▪ Specifies the intended use of the combi steamer. ▪ Explains the functions of the combi steamer and shows the position of its components.
For your Safety	▪ Describes the hazards posed by the combi steamer and appropriate preventive measures. **It is important that you read this chapter carefully.**
Conveying and setting up the appliance	▪ Specifies the basic appliance dimensions. ▪ Specifies requirements for the installation location. ▪ Provides information on conveying to the installation location, unpacking and setting up.
Connecting up the combi steamer	▪ Lists necessary approvals. ▪ Provides information on installing the electrical supply, gas, water, flue gas, waste water, air vent
Preparing for use	▪ Explains the procedure for preparing the appliance for use. ▪ Explains the procedure for taking out of service. ▪ Contains disposal instructions.
Optional equipment	▪ Describes features of the various optional equipment.
Technical data, dimensional drawings and connection diagrams	▪ Contains the technical data and connection diagrams.
Checklists and completion of installation	▪ Contains the checklists for ▪ installation ▪ Safety instructions and warnings ▪ Customer guidance and instruction. ▪ Contains information on the warranty and explains the completion procedure using the checklists.

Symbols used for safety instructions

Safety instructions are categorized according to the following hazard levels:

Hazard level	Consequences	Likelihood
⚠DANGER	Death / serious injury (irreversible)	Immediate risk
⚠WARNING	Death / serious injury (irreversible)	Potential risk
⚠CAUTION	Minor injury (reversible)	Potential risk
Caution	Damage to property	Potential risk

2 Design and function

Purpose of this chapter

This chapter specifies the intended use of the combi steamer and explains its functions.

Contents

This chapter includes the following topics:

	Page
Intended use of your combi steamer	10
Design and function of the combi steamer	11

Intended use of your combi steamer

Intended use

The combi steamer must only be used for the purposes specified below:

- The combi steamer is designed and built solely for professional cooking of a range of foodstuffs. Steam, convection and superheated steam are used for this purpose.
- The combi steamer is intended solely for commercial use.

Restrictions on use

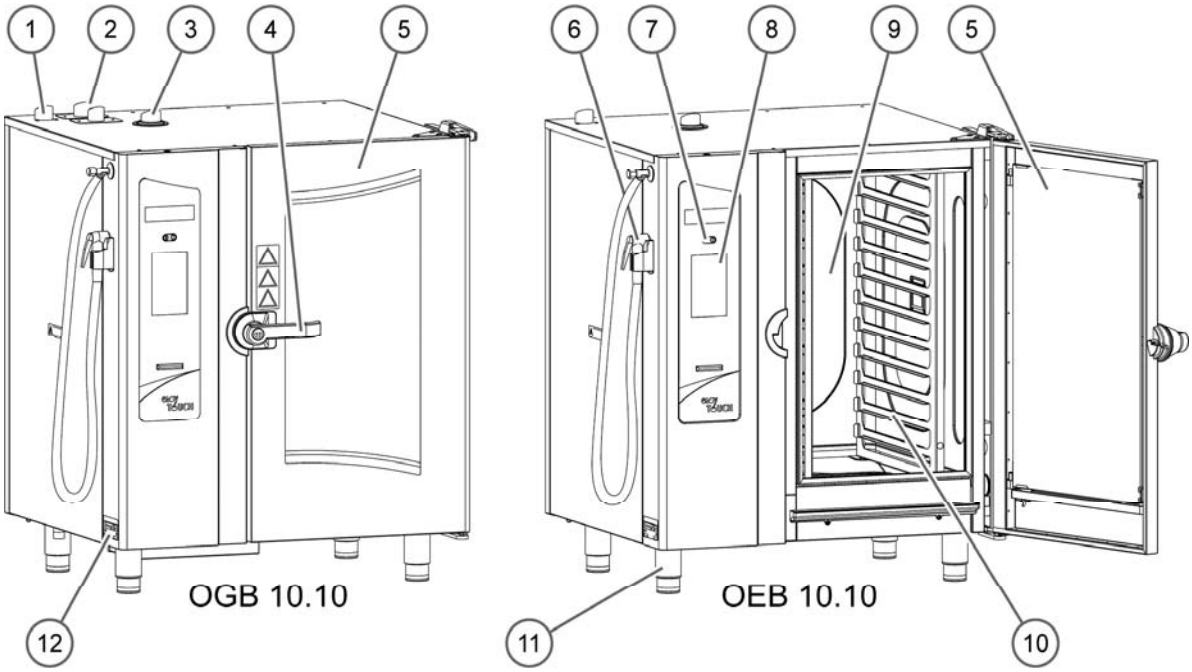
The following restrictions on use must be observed:

- The combi steamer must only be operated when all safety devices are fitted and in working order.
- Dry powder or granulated material must not be heated in the combi steamer.
- Easily inflammable objects with a flash point below 270 °C must not be heated in the combi steamer. These include items such as highly flammable oils, fats or cloths.
- Food in sealed tins or jars must not be heated in the combi steamer.

Design and function of the combi steamer

Table-top appliance construction

The following diagram shows a gas appliance and an electric appliance, representing all table-top appliances:



Components of the table-top appliances and their function

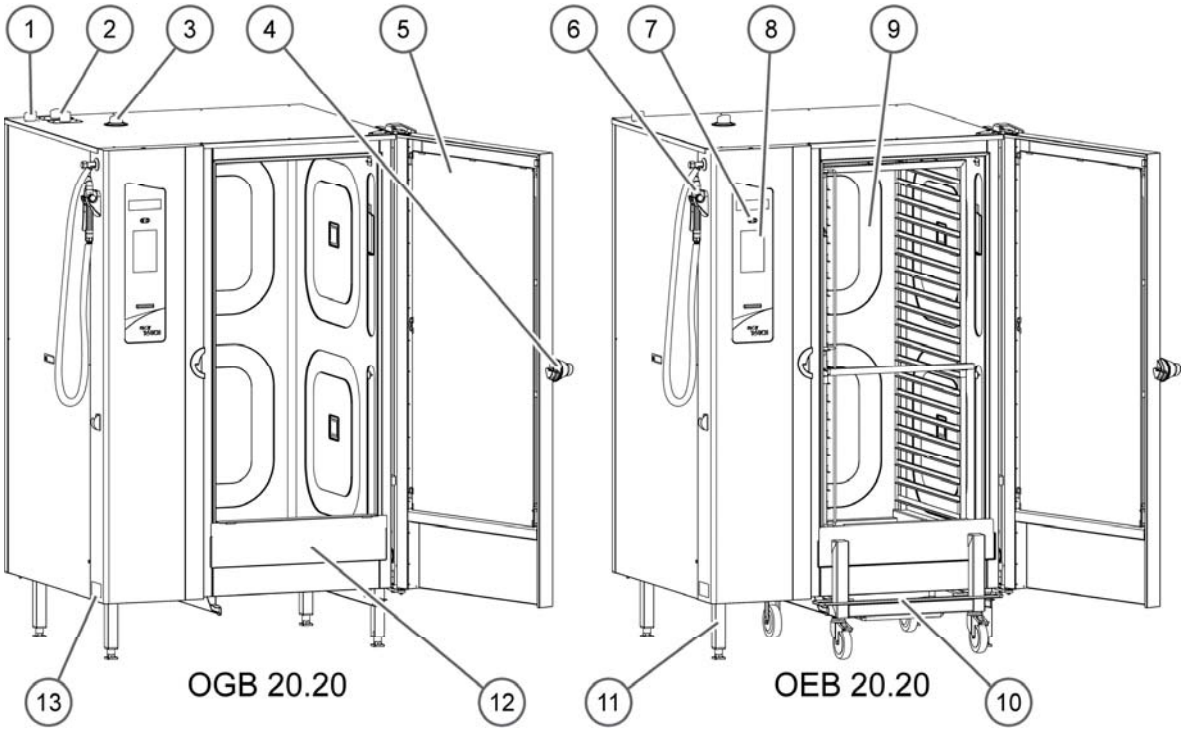
The components of the table-top appliances have the following function

No.	Name picture	Function
1	Air vent	Controls ventilation.
2	Gas flue pipe	Takes away flue gases: ▪ 1 gas flue pipe on appliances with injection ▪ 2 gas flue pipes on appliances with steam generator
3	Low-pressure failsafe device	Prevents the low pressure in the oven e.g. during fully automatic cleaning
4	Multipurpose door handle	Has the following functions depending on its position: ▪ Pointing vertically downwards: combi steamer closed, ready for cooking ▪ Horizontal: combi steamer open, in on-latch position ▪ 20 degrees above horizontal: Combi steamer can be opened Also has the following functions: ▪ Additional function as far as on-latch position ▪ In the on-latch position, door can be opened from inside oven in an emergency
5	Oven door ("disappearing door")	▪ Seals the oven during cooking. ▪ Special opening action allows it to slide back against the side of the combi steamer to save space.
6	Hand shower	▪ For rinsing out the cooker with water. ▪ Continuous flow adjustment.
7		Switches the combi steamer on and off

No.	Name picture	Function
8	Touchscreen	Central control of the combi steamer: ▪ Combi steamer operated by touching symbols on control-panel pages ▪ Status displays
9	Oven compartment	▪ Contains the food during cooking. ▪ Has a different number of shelf levels depending on model.
10	rack	Used to hold GN containers or baking trays.
11	Appliance feet	Can be adjusted in height to allow the combi steamer to be placed horizontally.
12	Type plate	Used for identifying the combi steamer.

Floor-standing appliance construction

The following diagram shows a gas appliance and an electric appliance, representing all floor-standing appliances:



Components of the floor-standing appliances and their function

The components of the table-top appliances have the following function:

No.	Name picture	Function
1	Air vent	Controls ventilation
2	Number of gas flue pipes	Takes away flue gases. ▪ 1 gas flue pipes: OGS 6.10, 6.20, 10.10, 10.20, 12.20 ▪ 2 gas flue pipes: OGS 20.10, 20.20 ▪ 2 gas flue pipes: OGB 6.10, 6.20, 10.10, 10.20, 12.20 ▪ 3 gas flue pipes: OGB 20.10, 20.20
3	Low-pressure failsafe device	Prevents low pressure in the oven e.g. during fully automatic cleaning.

No.	Name picture	Function
4	Multipurpose door handle	Has the following functions depending on its position: ▪ Pointing vertically downwards: combi steamer closed ▪ Horizontal: combi steamer open but in on-latch position ▪ 20 degrees above horizontal: Combi steamer can be opened Also has the following functions: ▪ Additional function as far as on-latch position ▪ In the on-latch position, door can be opened from inside oven in an emergency
5	Oven door ("disappearing door")	▪ Seals the oven during cooking. ▪ Special opening action allows it to slide back against the side of the combi steamer to save space.
6	Hand shower	▪ For rinsing out the cooker with water. ▪ Continuous flow adjustment.
7		Switches the combi steamer on and off
8	Touchscreen	Central control of the combi steamer: ▪ Combi steamer operated by touching symbols on control-panel pages ▪ Status displays
9	Oven compartment	▪ Contains the food during cooking. ▪ Has a different number of shelf levels depending on model
10	Loading trolley	Used for loading food
11	Appliance feet	Can be adjusted in height to allow the combi steamer to be placed horizontally.
12	Preheat bridge	Used for safety purposes during preheating and cleaning.
13	Type plate	Used for identifying the combi steamer.

3 For your Safety

Purpose of this chapter

This chapter provides you with all the information you need in order to use the combi steamer safely without putting yourself or others at risk.

This is a particularly important chapter that you should read through carefully.

Contents

This chapter includes the following topics:

	Page
Basic safety code	15
Warning signs on the combi steamer	16
Hazards and safety precautions	18
Safety devices	19
Requirements to be met by personnel, working positions	21

Basic safety code

Object of this safety code

This safety code aims to ensure that all persons who use the combi steamer have a thorough knowledge of the hazards and safety precautions, and that they follow the safety instructions given in the user manual and on the combi steamer. If you do not follow this safety code, you risk potentially fatal injury and property damage.

Working with the user manual

Follow the instructions below:

- Read in full the Safety chapter and chapters that relate to your work.
- Always keep the user manual to hand for reference.
- Pass on the user manual with the combi steamer if it changes ownership.

Working with the combi steamer

Follow the instructions below:

- Only those persons who satisfy the requirements stipulated in this user manual are permitted to use the combi steamer.
- People (including children) who, because of their physical, sensory or intellectual capabilities, or because of their lack of experience or knowledge, are incapable of using the appliance safely, should not use this equipment without the supervision or guidance of a responsible person.
- Only use the combi steamer for the specified use. Never, under any circumstances, use the combi steamer for other purposes that may suggest themselves.
- Take all the safety precautions specified in this user manual and on the combi steamer. In particular, use the prescribed personal protective equipment.
- Only stand in the working positions specified.
- Do not make any changes to the combi steamer, e.g. removing parts or fitting un-approved parts. In particular, you must not disable any safety devices.

More on this

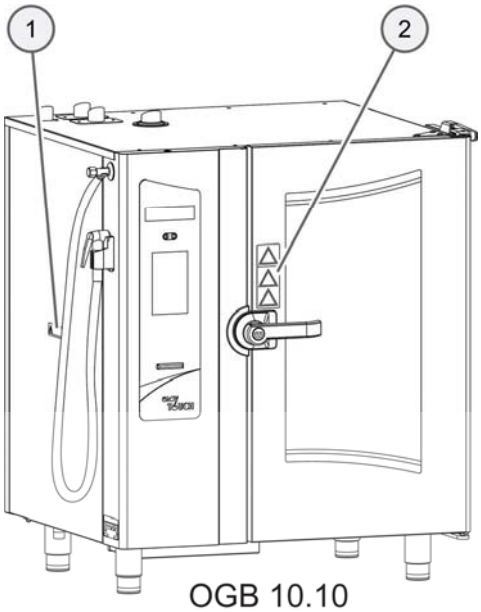
Related topics

> Warning signs on the combi steamer 16
> Safety devices 19

Warning signs on the combi steamer

Where are the hazard signs fitted?

The hazard signs are located in the following positions on the combi steamer:



OGB 10.10

Warning signs on the oven door

The following warning signs are fitted on the oven door above the door handle (2):

Warning sign	Description
	Warning of hot liquids Spillage of hot liquid foods can result in scalds if the upper shelves are loaded with liquids or foods that produce liquid during cooking. Shelves above the level marked by this warning sign (1.60 m) may not be seen by all users and should not, therefore, be used for liquids or foods that produce liquid during cooking.
	Warning of hot steam and vapor There is a risk of scalding from hot steam and vapor escaping when the oven door is opened.
	Warning of corrosive cleaning agents injected into oven If the oven door is opened during fully automatic cleaning, there is a risk of skin burns from contact with cleaning agents being injected during the cleaning program.

Warning signs on the side cover of the combi steamer

The following warning signs are fitted on the side cover (1) of the combi steamer:

Warning sign	Description
	Warning of electric shock There is a risk of electric shock from live parts if the appliance cover is opened.

Warning signs on the loading trolley for floor-standing appliances

The following warning signs are fitted on the loading trolley of floor-standing appliances:

Warning sign	Description
	Warning of hot liquids Spillage of hot liquid foods can result in scalds if the upper shelves are loaded with liquids or foods that produce liquid during cooking. Shelves above the level marked by this warning sign (1.60 m) may not be seen by all users and should not, therefore, be used for liquids or foods that produce liquid during cooking.

Hazards and safety precautions

Moving the appliance

When moving the combi steamer, be aware of the following hazards and take the specified preventive actions:

Hazard	Where or in what situations does the hazard arise?	Preventive action	Safety device
Risk of crushing from heavy items being carried	When lifting up and setting down the items being carried	Only allow suitably trained personnel to move the appliance using a pallet truck or forklift truck	None

installation

When installing the combi steamer, be aware of the following hazards and take the specified preventive actions:

Hazard	Where or in what situations does the hazard arise?	Preventive action	Safety device
Risk from live parts	▪ Under the cover ▪ Under the control panel	▪ Work on the electrical system must only be performed by an authorized customer service engineer. ▪ Professional working. ▪ Disconnect power supply before removing the cover.	Cover
Risk of electric shock if the water supply is leaking or cracked.	▪ On the combi steamer ▪ In the entire working area	▪ Use a permanent connection. ▪ Use only suitable pipes that comply with DIN EN 61170.	None
Risk of explosion from gas	Where combi steamer is installed	▪ Work on the gas system must only be performed by an approved gas fitter. ▪ Professional working. On smelling gas: ▪ Cut off the gas supply. ▪ Ventilate room. ▪ Do not operate any electrical equipment. ▪ Do not create naked flames. ▪ Get help.	None
Risk of suffocation from faulty combustion	Where combi steamer is installed	▪ Work on the gas system must only be performed by an approved gas fitter.	None
Risk of suffocation from insufficient supply of air for combustion	Where combi steamer is installed	▪ Work on the gas system must only be performed by an approved gas fitter.	None

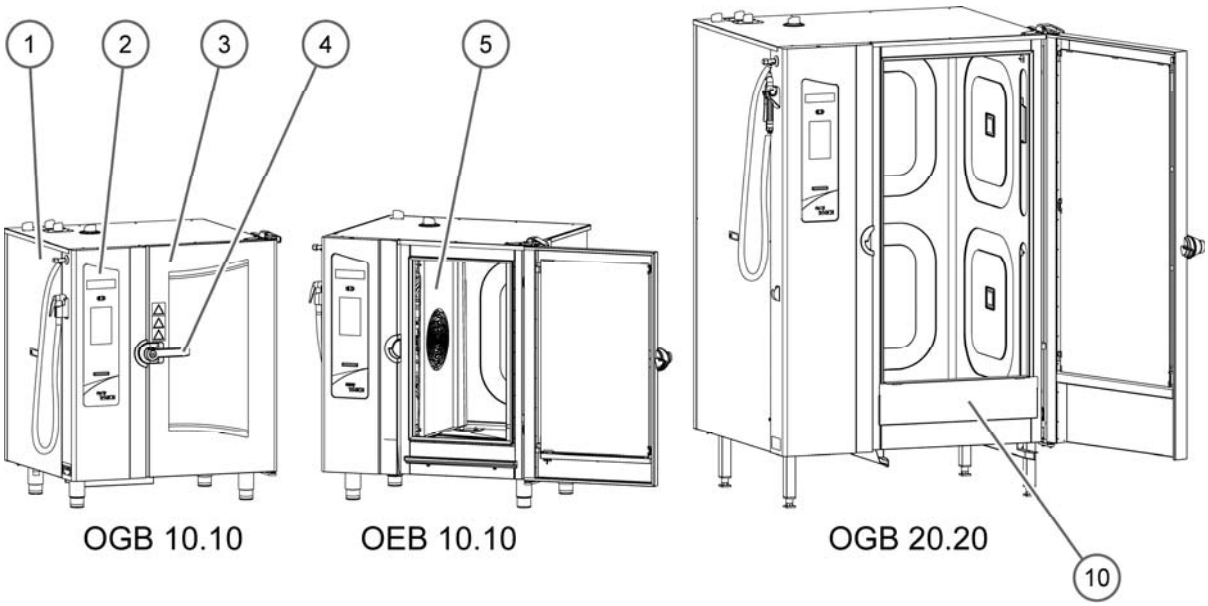
Safety devices

Meaning

The combi steamer has a number of safety devices to protect the user from hazards. It is absolutely essential that all safety devices are fitted and in working order when operating the combi steamer

Position

The following diagrams show the location of the safety devices:



Functions

The following table enumerates all the safety devices on the combi steamer, explains their function and describes the check procedure:

No.	Safety device	Function	Check
1	Cover can only be removed using tool	▪ Prevents live parts being touched accidentally. ▪ Prevents access to the moving fan from the wiring compartment.	Check that cover is fitted.
2	Control panel can only be removed using a tool	Prevents live parts being touched accidentally.	Ensure that the control panel is fitted.
3	Oven door	Protects the operator and outside environment from hot steam.	Check regularly for scratches, cracks, dents etc. and replace door if any are found.
4	On-latch position of oven door	Prevents scalding of user's face and hands from escaping steam.	Check door positions at low temperature as described in *Opening the oven door safely* in the user manual.
5	suction panel in oven can only be removed using tool	Prevents access to the moving fan .	See *Removing and fitting the suction panel* in the user manual for further details.
6 **(no picture)**	Magnetic door switch: electrical door sensor in oven door	Switches off the fan and heater when the oven door is opened.	Check magnetic door switch at low temperature: **Action**

No.	Safety device	Function	Check
			▪ Opening the oven door fully ▪ Press Start **Result** Motor must not start up.
7 **(no picture)**	In-Out function of oven door; Prevents anyone being locked inside the oven accidentally	Oven door in on-latch position: Allows the oven door to be pushed open from the inside after shutting the door.	Check at low temperature: put the oven door in the on-latch position (see *Opening the oven door safely* in user manual) **Action** From the outside, pull forcefully on the top left of the oven door **Result** Oven door must open.
8 **(no picture)**	Automatic rinsing after power failure in case cleaning agent left in combi steamer	Re-starts fully automatic cleaning in a defined state after power failure	This test is a software function. The test is not performed by the operator.
9 **(no picture)**	Spray-guard	Stops the cleaning agent being injected during fully automatic cleaning when the oven door is opened Prompt to close the oven door.	The operability of the magnetic door switch is checked by the software at the beginning of each cleaning program
10	Preheat bridge	Prevents scalding from escaping steam when the loading trolley is not in the floor-standing appliance during preheating.	See *Inserting and removing the preheat bridge (floor-standing appliances only)* in the user manual for further details

Requirements to be met by personnel, working positions

Requirements to be met by personnel

Those people using the combi steamer must meet the following requirements:

Staff qualifications	Tasks	Personal protective equipment required	Chapter to read before task
Equipment mover	▪ Conveying within the establishment	Trained in the use of a pallet truck and forklift truck	**For your Safety** on page 14 **Conveying and setting up the appliance** on page 22
Service Engineer: ▪ Is an authorized customer service engineer. ▪ Has relevant technical training. ▪ Is trained in the particular appliance.	▪ Setting up the appliance ▪ Connecting the appliance ▪ Preparing the appliance for use ▪ Instructing the user	Personal protective equipment as specified by national regulations for the given activity	**Design and function** on page 9 **For your Safety** on page 14 **Conveying and setting up the appliance** on page 22 **Connecting up the combi steamer** on page 33 **Preparing for use** on page 56 **Optional equipment** on page 60
Gas fitter: ▪ Is a gas fitter authorized by the gas supply company. ▪ Has relevant professional training.	▪ Connecting the appliance: gas	Personal protective equipment as specified by national regulations for the given activity	**Design and function** on page 9 **For your Safety** on page 14 **Connecting up the combi steamer** on page 33
Electrician: ▪ Is an authorized customer service engineer. ▪ Has relevant professional training. ▪ Is a qualified electrician.	▪ Connecting the appliance: electric	Personal protective equipment as specified by national regulations for the given activity	**Design and function** on page 9 **For your Safety** on page 14 **Connecting up the combi steamer** on page 33

Working positions when installing and preparing the appliance for use

The working position for personnel installing and preparing the appliance for use is the entire appliance area.

4 Conveying and setting up the appliance

Purpose of this chapter

This chapter specifies all the requirements for the installation location of the combi steamer, and explains the correct on-site procedure for conveying and unpacking the combi steamer, lifting it off the pallet and setting it up.

Contents

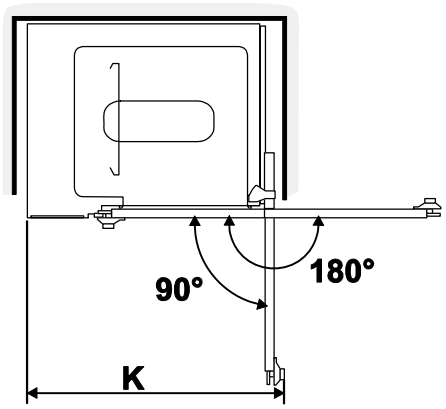
This chapter includes the following topics:

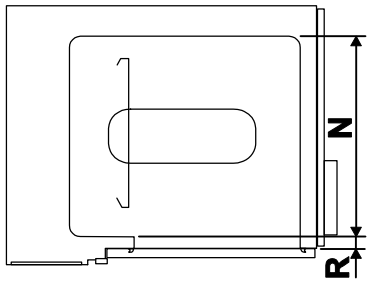
	Page
Dimensions, summary	23
Requirements for the installation location	24
Taking to the installation location	27
Unpacking	29
Setting up the appliance	31

Dimensions, summary

Appliance dimensions

The following diagrams and tables summarize the appliance dimensions:





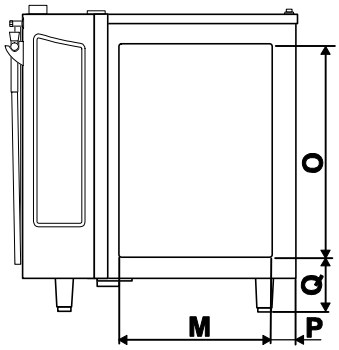


		Table-top appliances				Floor-standing appliances		
		6.10	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
K = width with door open 90°	[mm]	1061	1302	1016	1302	1345	1016	1345
M = interior width of oven	[mm]	445	650	445	650	650	445	650
N = interior depth of oven	[mm]	640	640	640	840	840	640	840
O = interior height of oven	[mm]	492	535	760	760	956	1492	1492
P = width of hinge side	[mm]	45	45	45	45	60	60	60
Q = ledge height	[mm]	280	280	280	280	380	380	380
R = oven mouth depth	[mm]	33	33	33	33	33	33	33
Hand shower hose length	[mm]	1115	1115	1430	1430	1115	1640	1640

Material

The interior and exterior structure of the combi steamer is made of stainless steel.

Requirements for the installation location

Risk of burns

⚠WARNING

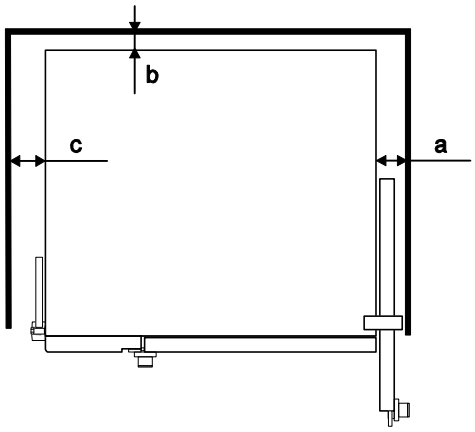
Risk of burns if water splashes into hot fat

There is a risk of burns for the operator if water splashes into hot fat.

- ▶ Make sure that there are no deep-fat fryers or uncovered pans of fat within the radius of action of the hand shower.
- ▶ Follow the instructions given in the section "Requirements for the installation location".

Horizontal minimum clearance

The following diagram shows the position of the horizontal minimum clearance distances between adjacent walls and surfaces:



The following table shows the horizontal minimum clearance distances between adjacent walls and surfaces:

Appliance type		a	b	c
Table-top appliances	[mm]	50	-	-
Floor-standing appliances	[mm]	75	50	100
Table-top appliances: Minimum clearance needed to allow the disappearing door to slide back fully along the side of the appliance.	[mm]	130	-	-
Floor-standing appliances: Minimum clearance needed to allow the disappearing door to slide back fully along the side of the appliance.	[mm]	150	-	-

Minimum vertical clearance above the appliance

The following points must be taken into account for the minimum vertical clearance above the appliance:

- The minimum vertical clearance depends on:
  - the type of gas flue system and
  - the nature of the ceiling.
- Gas appliances can reach temperatures of up to 400°C.

The following table shows the values for the minimum vertical clearance above:

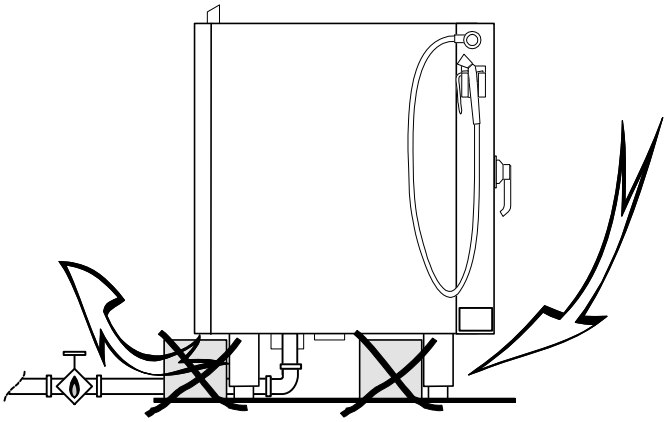
Appliance type		minimum vertical clearance above
Electric appliances	[mm]	500
Gas appliances	[mm]	1000

Minimum vertical clearance below the appliance

The following points must be taken into account for the minimum vertical clearance below the appliance:

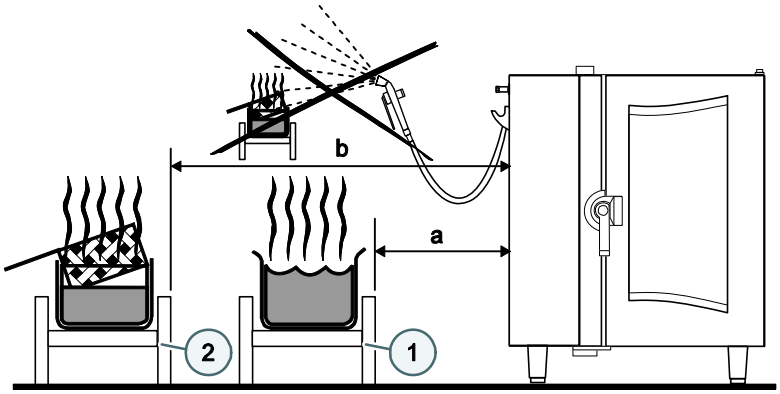
- Table-top appliances need to be installed at a height between 620 mm and 900 mm.
- For gas appliances this area must not be blocked or obstructed.

The following diagram shows the passages required for the free flow of air:



Minimum distance from heat sources

The following diagram shows the minimum distances from heat sources:



The following table shows the values for the minimum distances from heat sources:

	[mm]
a: Heat source (1)	500
b: Deep fat fryers, hot fat or oil (2)	Radius of action of the hand shower

Minimum distance from flammable materials

There must be no flammable surfaces or materials (e.g. gases or liquids) in the vicinity of the combi steamer.

Subfloor

The subfloor must have the following properties:

- The subfloor must be flat and horizontal.
- The subfloor must be able to bear the weight of the appliance including the maximum loading weight. These figures are given in the chapters "Design and function" and "Technical data".

Environmental conditions

The following environmental conditions must be satisfied:

- Health and safety at work regulations and local and national standards and directives must be observed.
- The ambient temperature must lie between +4°C and +35°C.
- The appliance must not be operated in potentially explosive atmospheres.
- The appliance must be sheltered from the rain if operated outdoors.

Taking to the installation location

Space required for conveying the appliance

The table below shows the required door size to allow the combi steamer to be brought to its intended location:

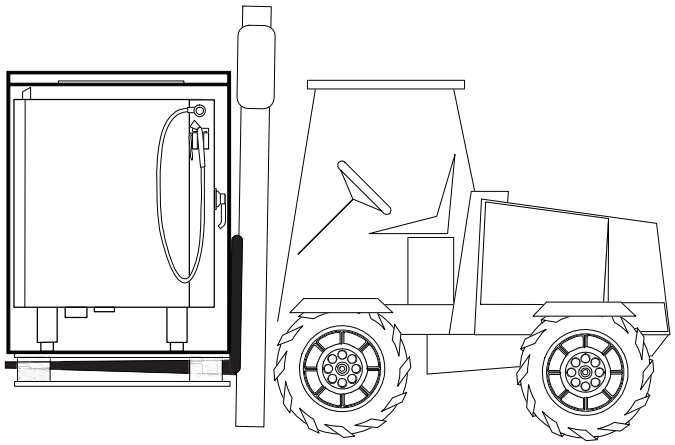
		Table-top appliances			Floor-standing appliances			
		6.10	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
Width	**[mm]**	1130	1410	1130	1410	1435	1150	1435
Height	**[mm]**	1002	1085	1270	1290	1596	2132	2138

Conveying the appliance to the installation location

Please observe the following points when conveying the appliance:

- Always move the appliance on a pallet.
- Always move the appliance in an upright position.

The following diagram illustrates how to move the combi steamer using a forklift truck:

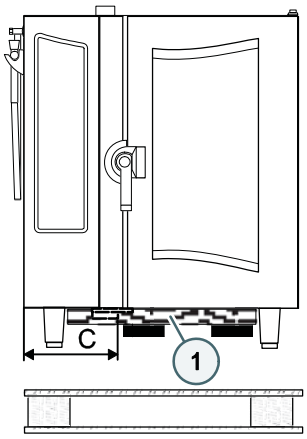


Taking the appliance off the pallet

Observe the following points when lifting the appliance off the pallet:

- Use a forklift truck or pallet truck.
- Place lengths of wood underneath (1).
- Make sure that the forks are in the correct position (keeping to the right of the drain outlet (C))

The following diagram shows how to take the combi steamer off the pallet:



The following table shows the distance C:

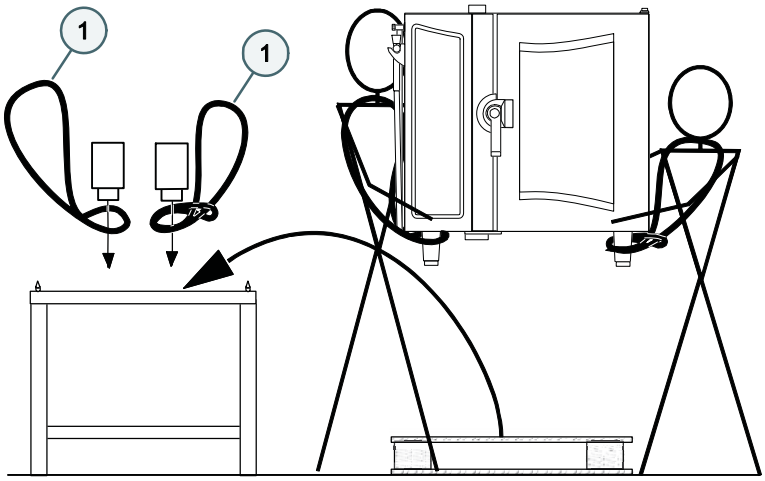
		XX.10	XX.20
C	[mm]	280	320

Using lifting straps to take the table-top appliance off the pallet

Observe the following points when lifting a table-top appliance off the pallet:

- Use the lifting straps (1).
- Be aware of the weight of the appliance when lifting it. The weight is given in the Technical Data.

The following diagram shows how to move a table-top appliance using lifting straps:

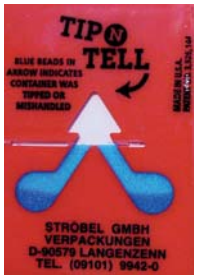
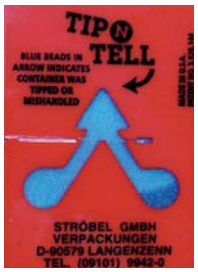


Unpacking

Checking the tip indicator

Before unpacking the appliance, check the tip indicator on the packaging.

The following table shows the possible tip'n'tell indications:

Indication	Meaning	Action
	Light arrow tip: Appliance has been transported correctly.	Unpack the appliance.
	Blue arrow tip: Appliance has been turned over or transported on its side.	Check the goods for damage. Note down on the accompanying paperwork the fact that the tip indicator has actuated and also any damage.

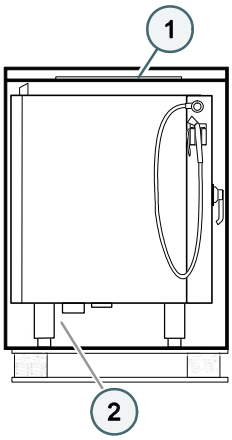
Unpacking

Unpack the appliance as follows:

Step	Action
1	Remove the outer packaging.
2	Remove all cardboard, packaging materials, documents, stickers, containers and loading trolley etc. from inside the oven.
3	Remove the customer documentation. The customer documentation lies under the lid of the cardboard packaging box. It is located in position ▪ (1) for table-top appliances. ▪ (2) for floor-standing appliances.
4	Check the combi steamer for damage. If you suspect it has been damaged in transit notify your dealer/carrier immediately. Please notify the manufacturer in writing within three days. **Caution** Never install or put into service a damaged appliance under any circumstances.

Customer documentation

The following diagram shows where the customer documentation may be located:



Included with the appliance

The following table shows the parts included with the combi steamer:

Appliance	Included with the appliance
Basic table-top model	1x combi steamer 1x left-hand rack 1x right-hand rack 1x installation manual 1x user manual
Basic floor-standing model	1x combi steamer 1x loading trolley 1x installation manual 1x user manual
in addition for CONVOClean *system*	1x 10-liter canister, empty

Setting up the appliance

All appliances

The following points must be observed when setting up the combi steamer:

- Ensure the appliance cannot tip up or slide.
- The ventilation slots on the appliance base (2) and the air vent and gas flue pipe on the appliance top (1) must not be covered, blocked or obstructed.

The following diagram shows the air vent and gas flue pipe (1) and the ventilation slots (2):

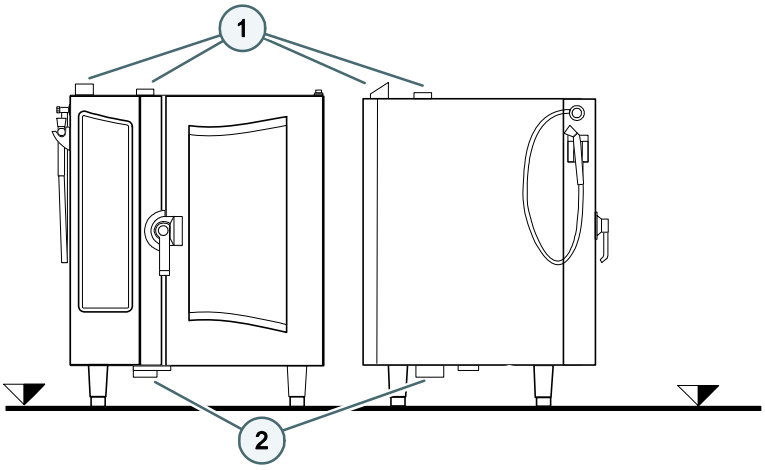


Table-top appliance on work surface

The following points must be observed when setting up a table-top appliance on a work surface:

- Ensure the appliance is horizontal by adjusting the height of the appliance feet.
- Use a spirit level for this task.

The following diagram shows how to use the spirit level and adjust the appliance feet to ensure the appliance is horizontal:

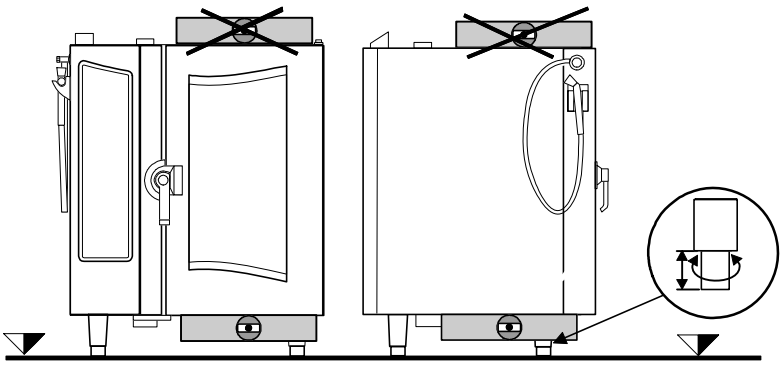


Table-top appliance on oven stand

The following points must be observed when setting up a table-top appliance on an oven stand:

- Ensure the oven stand is horizontal by adjusting the height of the feet.
- Use a spirit level for this task.
- Hold the appliance feet in position using the locating pins on the oven rack.

The following diagram shows how to use the spirit level and adjust the feet to ensure the oven rack is horizontal:

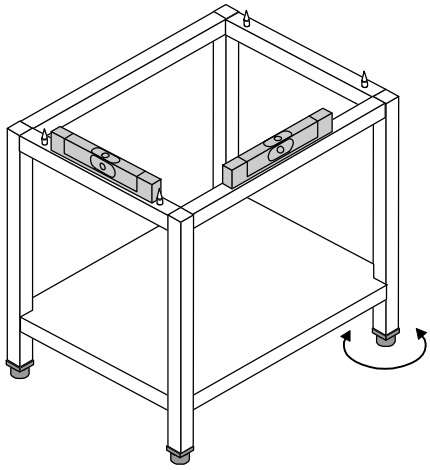


Table-top appliance on oven stand with wheels

Follow the instructions given for "Table-top appliance on oven stand", plus the following points:

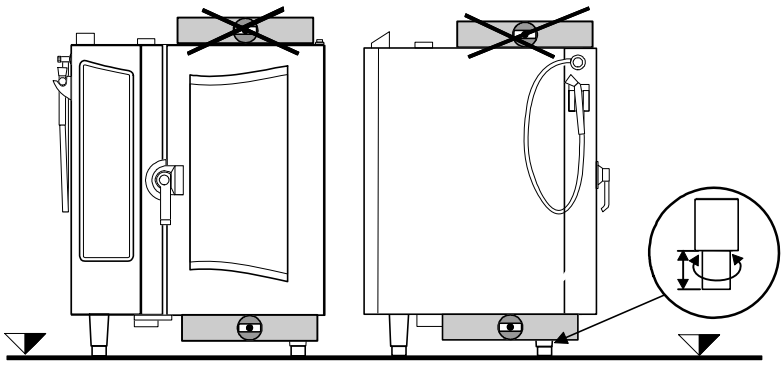
- Lock the wheels before connecting up the appliance.
- Do not release the wheel locks until the appliance has been disconnected.

Floor-standing appliance

The following points must be observed when setting up a floor-standing appliance:

- Ensure the appliance is horizontal by adjusting the height of the feet.
- Use a spirit level for this task.
- Make sure that the loading trolley is standing horizontally in the appliance.

The following diagram shows how to use the spirit level and adjust the appliance feet to ensure the appliance is horizontal:



5 Connecting up the combi steamer

Purpose of this chapter

This chapter explains how to install your combi steamer.

Contents

This chapter includes the following topics:

	Page
Electrical installation	34
Energy optimization system	36
Water intake	37
Water drain	40
Gas installation to a fixed connection on OGS/OGB appliances	44
Gas installation for liquid gas bottles on OGS/OGB appliances	47
Flue gas removal system for OGS/OGB appliances	51
Safety precautions for gas appliances	54
Approvals	55

Electrical installation

Electric shock

⚠DANGER

Risk of electric shock from live parts

When the cover is open, there is a risk of electric shock from touching live parts.

- ▶ Disconnect the combi steamer from the power supply before removing the cover.

Hand injuries from fan

⚠WARNING

Risk of hand injuries from fan

When the cover is open, there is a risk of hand injuries from the rotating fan in the wiring compartment.

- ▶ Disconnect the combi steamer from the power supply before removing the cover.

Requirements

The electrical supply must comply with the following regulations and requirements:

- VDE (0100/0700)
- Currently valid regulations of the electricity supply company
- Electrical data on the type plate

The electricity supply must be connected by an authorized customer service engineer as defined in DIN EN 50110-1.

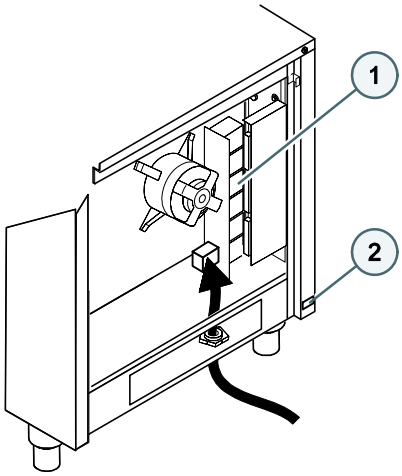
A separate voltage source must not be connected to the appliance.

Leakage current

The factory-tested leakage current of the appliance is < 5 mA (EN 60335-1:2002).

Type plate, circuit diagram and spare parts list

The following diagram shows the appliance viewed from the left side to identify the position of the type plate (2), the circuit diagram (1) and the spare parts list (1):



Design of the electrical installation

The following table shows the design rules for the electrical installation:

Component	Description
Fuse	Fuse-protection and connection of the combi steamer must comply with local regulations and national installation directives. If necessary, the combi steamer must be incorporated in a potential equalization system.
Disconnection device	An all-pole disconnection device with a minimum contact separation of 3 mm must be installed close to the appliance. The disconnection device is used to disconnect the appliance from the electrical supply for cleaning, repair and installation work.
Power cord	The power cord must be oil-resistant, sheathed and flexible. It must comply with code designation 60245 IEC 57 (rubber insulated cord with polychloroprene sheathing H05RN-F, H07RN-F)
Main terminal block	The main terminal block is located behind the left-hand removable side wall.
Cable gland	The cable gland serves as a strain relief mechanism and must be tightened firmly. A specific phase angle is not required
Electrical supply	There is no need to connect the supply for a specific direction of rotation.

Carrying out the electrical installation

Follow the steps below to connect your combi steamer to the electrical supply:

Step	Action
1	Compare the ratings on the type plate with the building's power supply and circuit diagram.
2	Check all screw and clamp connections on the appliance. There is a risk of connections loosening during transport.
3	Connect the appliance to the potential equalization system.
4	Connect the appliance by the mains cord to the disconnection device.
5	Connect the disconnection device to the ground fault circuit interrupter.
6	Make sure that the cable gland is tightened firmly because it also acts as a cable strain relief.
7	Remove all protective films from inside and outside the appliance.

Energy optimization system

Electric shock

⚠DANGER

Risk of electric shock from live parts

When the cover is open, there is a risk of electric shock from touching live parts.

- ▶ Disconnect the combi steamer from the power supply before removing the cover.

Hand injuries from fan

⚠WARNING

Risk of hand injuries from fan

When the cover is open, there is a risk of hand injuries from the rotating fan in the wiring compartment.

- ▶ Disconnect the combi steamer from the power supply before removing the cover.

Energy optimization system and combi steamer

You can connect the combi steamer to an energy optimization system (e.g. SICOTRONIC).

Please note the following points:

- The minimum ON period is 8 minutes.
- The maximum OFF period is 30 seconds.
- The system may prolong pre-heat and cooking times.

Terminals for connecting to an energy optimization system

The combi steamer is connected to an energy optimization system via isolated contacts.

The terminals (B) and (C) of the main terminal block are isolated contacts. The main terminal block is located behind the left-hand removable side wall.

Interpreting the signal:

- If the appliance is switched on, the signal contact is closed.
- If the connection to the energy optimization system is broken, the appliance switches into power-save mode (no heat output).

Installing an energy optimization system

Follow the steps below to connect your combi steamer to an energy optimization system:

Step	Action
1	Refer to the circuit diagram.
2	Remove the wire connection between the terminals (B) and (C) on the main terminal block.
3	Connect the terminals (B) and (C) of the main terminal block to the energy optimization system.

Water intake

Requirements

Observe the local and national regulations.

Water quality and water hardness

Compare the water quality and water hardness of the in-house supply with the values specified in the "Water quality" and "Water hardness" tables in the "Technical Data" section . If the specified conditions are not satisfied, you must install suitable water filters and water treatment equipment.

Water filters and water treatment equipment

The following table lists the water filters and water treatment equipment that may be needed:

Component	Description
sediment filter 0.08 mm	A 0.08 mm sediment filter must be installed if the water has a high level of impurity.
Activated carbon filter	If the redox potential of the water exceeds 300 mV and if the chlorine concentration (Cl_2) > 0.1 mg/l then an activated carbon filter must be installed.
Hydrogen ion exchanger	If the water hardness exceeds the permitted level, a hydrogen ion exchanger must be installed. The hydrogen ion exchanger only needs to handle the water consumption for moisture removal and steam generation.

The following table shows the flow rate required for the hydrogen ion exchanger:

		Table-top appliances			Floor-standing appliances			
		6.10	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
OEB/OGB	**[l/min]**	0,2	0,4	0,4	0,6	0,7	0,7	1,0
OES/OGS	**[l/min]**	0,15	0,2	0,2	0,2	0,3	0,5	0,5

Water consumption

Note that the water consumption may increase significantly if the moisture removal option is used frequently.

Design of the water installation

The following table shows the sequence of filters and water treatment equipment in the flow direction:

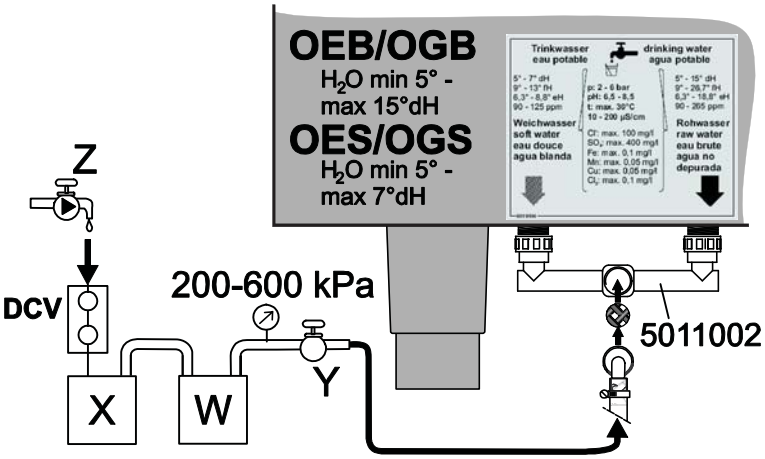
Symbol	Meaning
Z	Water supply line
X	Sediment filter 0.08 mm
W	Activated carbon filter
V	Hydrogen ion exchanger
Y	Cut-off tap with protective filter

Implementation of the water installation

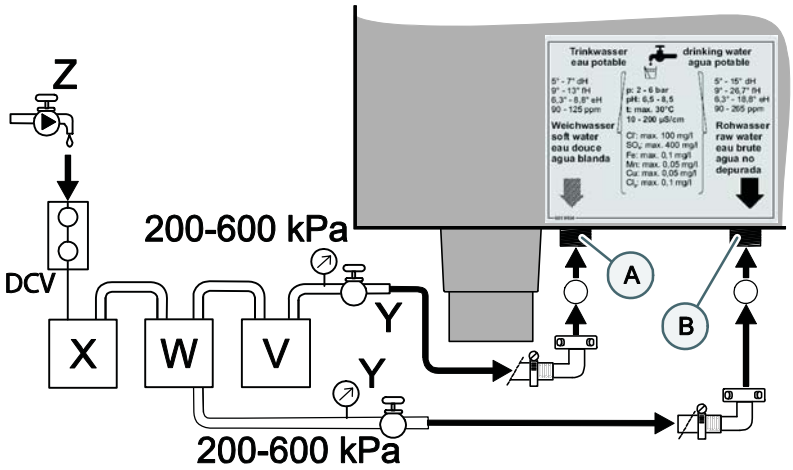
The combi steamer is designed to be permanently connected to the customer's water supply. If it is planned to use a flexible connecting pipe to supply water to the combi steamer, an EN 61177 compliant connecting pipe with a diameter of 3/8" min. must be used.

Installation diagram

The following diagram shows the connection diagram for water installations without a hydrogen ion exchanger:



The following diagram shows the connection diagram for water installations containing a hydrogen ion exchanger:



Item	Meaning
A	Soft water connection
B	Cold water connection

Appliance connection

Connect the appliance to a cold water supply, which must be of drinking water quality. Warm water up to a temperature of 40°C can be supplied to the soft water connection.

The appliance water connection is located underneath the combi steamer (connection diagram: point A and B). Fit protective filters.

Installing the water supply

Follow the steps below to provide the water supply to your combi steamer:

Step	Action
1	Find out the water quality and water hardness from your local water supply company.
2	Flush through the customer's water supply pipe.
3	Install the required water filters and water treatment equipment (X, W, V).
4	Fit a separate cut-off tap (Y) with protective filter for each appliance.
5	Connect the appliance to the pressure hose as shown in the connection diagram.
6	Inform the user of the service intervals for the filters and water treatment equipment.
7	Flush out the filter system.

Further information

The following sources provide information on the water supply for your combi steamer:

- Drinking water installation data sheet
- Water circuit diagram behind the motor cover
- DIN 1988
- DIN EN 61770

Water drain

Requirements

Observe the local and national regulations.

Safety overflow

The safety overflow is located on the underside of the combi steamer and is completely open to avoid any backwater build-up.

The safety overflow prevents waste water from getting into the oven, for instance when the drain is blocked or partially obstructed or if there is a rush of water during automatic cleaning.

In these circumstances, the waste water escapes via the open safety overflow under the appliance.

It is therefore recommended to connect the overflow to an open funnel waste trap for appliances with an automatic cleaning system.

Drain connection

The following points must be observed when connecting the drain outlet:

- The drain outlet is located underneath the combi steamer (connection diagram: point C).
- The drain pipe must be at least DN 50 in size and must not contain any reduction in cross-section.
- The drain pipe must have a minimum slope of 5 % (3°).

Drain connection for table-top appliances

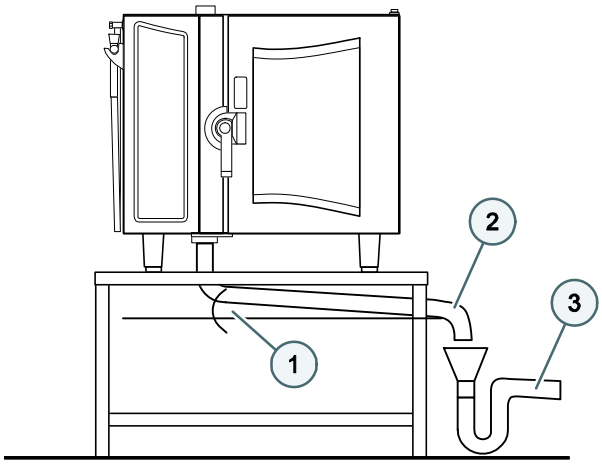
A rigid pipe must be used to connect the drain outlet from table-top appliances to the drain system, either via an open drain connection (e.g. funnel waste trap) or via a fixed connection.

Diagram showing the connection of a table-top appliance to a funnel waste trap

Caution
The funnel waste trap must not be installed under the combi steamer. Fit the funnel waste trap beside or behind the combi steamer.

The minimum internal diameter of the drain pipe is 46 mm (DN 50). If more than one appliance is connected to one drain pipe, this pipe must be large enough to allow the waste water to flow out unchecked.

The following diagram shows the drain connection to a funnel waste trap for table-top appliances:

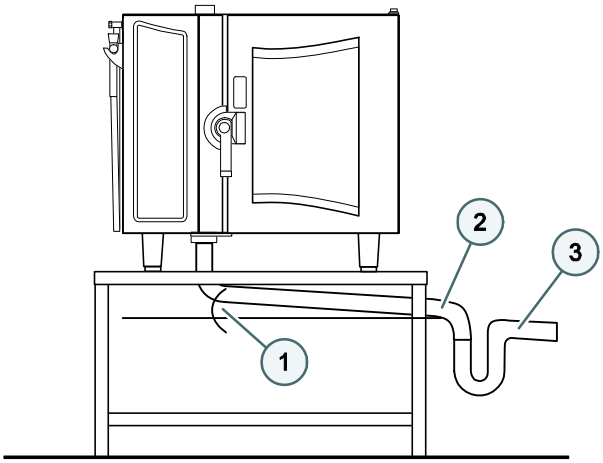


Item	Meaning
1	Slope 5% (3°)
2	Waste pipe DN 50 (minimum internal diameter = 46 mm)
3	Drain pipe DN 50 (minimum internal diameter = 46 mm)

Diagram showing the fixed drain connection of a table-top appliance

The minimum internal diameter of the drain pipe is 46 mm (DN 50). If more than one appliance is connected to one drain pipe, this pipe must be large enough to allow the waste water to flow out unchecked.

The following diagram shows the fixed drain connection for table-top appliances:



Item	Meaning
1	Slope 5% (3°)
2	Waste pipe DN 50 (minimum internal diameter = 46 mm)
3	Drain pipe DN 50 (minimum internal diameter = 46 mm)

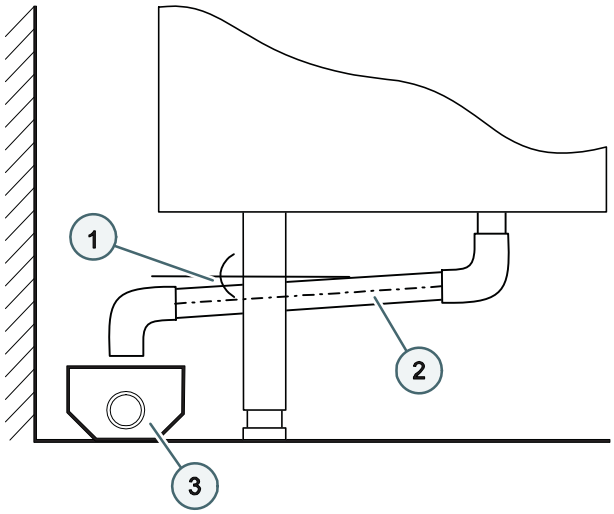
Drain connection for floor-standing appliances

A rigid pipe must be used to connect the drain outlet from floor-standing appliances to the drain system, via an open drain connection (e.g. open tank), an open drain or a fixed connection.

Diagram showing the drain connection of a floor-standing appliance to an open tank

The minimum internal diameter of the drain pipe is 46 mm (DN 50). If more than one appliance is connected to one drain pipe, this pipe must be large enough to allow the waste water to flow out unchecked.

The following diagram shows the drain connection to an open tank for floor-standing appliances:

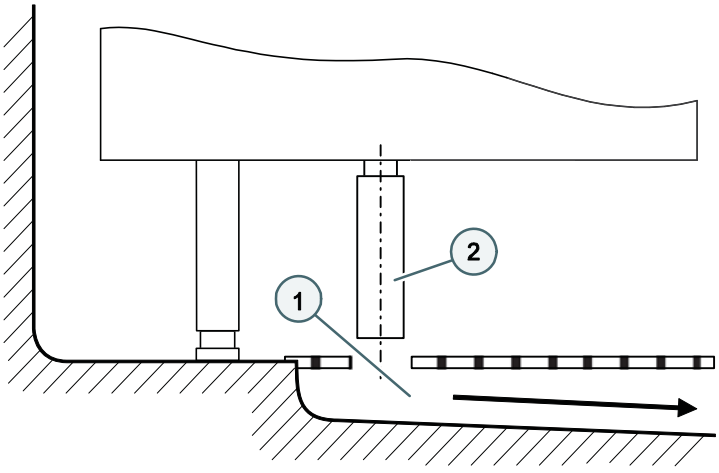


Item	Meaning
1	Slope 5% (3°)
2	Waste pipe DN 50 (minimum internal diameter = 46 mm)
3	Tank with DN 50 drain pipe (minimum internal diameter = 46 mm)

Diagram showing the drain connection of a floor-standing appliance to an open drain

The minimum internal diameter of the drain pipe is 46 mm (DN 50). If more than one appliance is connected to one drain pipe, this pipe must be large enough to allow the waste water to flow out unchecked.

The following diagram shows the drain connection to an open drain for floor-standing appliances:

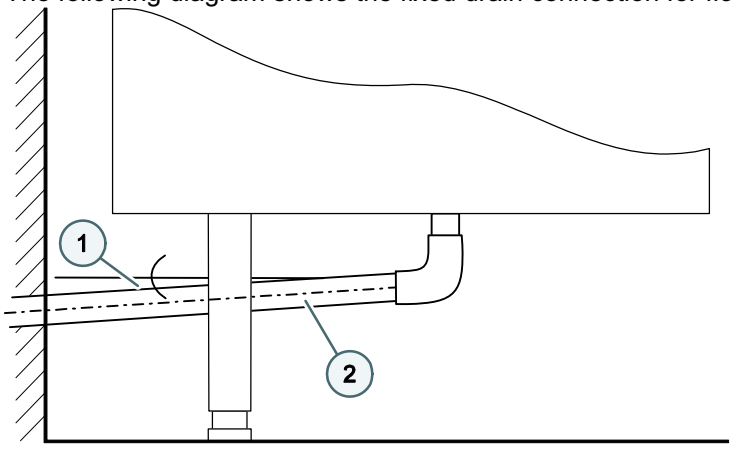


Item	Meaning
1	Slope 5% (3°)
2	Waste pipe DN 50 (minimum internal diameter = 46 mm)

Diagram showing the fixed drain connection of a floor-standing appliance

The minimum internal diameter of the drain pipe is 46 mm (DN 50). If more than one appliance is connected to one drain pipe, this pipe must be large enough to allow the waste water to flow out unchecked.

The following diagram shows the fixed drain connection for floor-standing appliances:



Item	Meaning
1	Slope 5% (3°)
2	Waste pipe DN 50 (minimum internal diameter = 46 mm)

Waste water temperature

The average waste water temperature equals 65°C.

Fitting the drain connection

Follow the steps below to provide the water drain for your combi steamer:

Step	Action
1	Connect the appliance as shown in the connection diagram.

Further information

The following sources provide information on the drain connection for your combi steamer:

- DIN 1988 parts 2 and 4
- DIN EN 1717
- Local waste water regulations

Gas installation to a fixed connection on OGS/OGB appliances

Risk of explosion

⚠DANGER

Risk of explosion from escaping gas

Escaping gas can ignite and cause an explosion.

If you smell gas, follow the instructions below:

- ▶ Cut off the gas supply immediately.
- ▶ Ventilate the room thoroughly.
- ▶ Avoid creating a spark (e.g. by operating a switch, using a phone or touching electrical switching elements).
- ▶ Tell the gas supplier or even the fire brigade (external telephone).
- ▶ Leave the building together with all other personnel.

Risk of suffocation

⚠DANGER

Risk of suffocation from lack of air suitable for breathing

Inadequate ventilation at the installation location can lead to suffocation.

Follow the instructions below accordingly:

- ▶ Only use the appliance in well ventilated rooms.
- ▶ Ensure that there is a sufficient supply of air for the level of combustion.

Class of gas appliance

There are two possible classes of gas appliance for the combi steamers:

Type	Meaning	Usage
B23	Open flues dependent on room air ▪ with fan upstream of the burner and ▪ **without** draught diverter	OGS and OGB appliances are supplied as type B23 gas appliances
B13	Open flues dependent on room air ▪ with fan upstream of the burner and ▪ **with** draught diverter	All appliances can be installed as type B13 appliances by retrofitting a draught diverter (available as an accessory).

Gas installation procedures

The following points must be observed when installing the gas:

- The gas installation must only be carried out by an approved contract installation company of the relevant gas supplier.
- The gas fitter must not work on those parts sealed by the manufacturer or its authorized agents.
- The gas installation must be performed in accordance with local regulations.
- The gas installation must be performed in accordance with the regulations of the gas supply company.
  In Germany these are:
  - Technische Regeln Gasinstallation TRGI (Techncial regulations for gas installation)
  - Technische Regeln Flüssiggas TRF (Technical regulations for liquid gas)
  - DWGW Arbeitsblatt G634 (DWGW worksheet)
  - DWGW Arbeitsblatt G21 (DWGW worksheet)

Appliance gas data

The combi steamer has been factory set to the requirements stated in the order. The type plate contains the figures for the gas settings.

Requirements

The supply flow pressure must be suitable for the appliance. If the measured supply flow pressure differs from the figures given in the table below, the gas supply company must be notified. The appliance must not be put into service and the gas supply must be switched off.

Summary of gas data

The table below lists the possible gas data (as per CE) at 15°C and 1013 mbar dry:

Family	Gas type and symbol	Supply flow pressure	Wobbe Index		Lower heating value		Higher heating value	
			lower	higher				
			W_U	W_O	H_U	H_U	H_O	H_O
		[mbar]	[MJ/m³]					
2H (E)	Natural gas (H) G20	17 - 25	45,7	50,7	34,0	-	37,8	-
2L (LL)	Natural gas (L) G25	18 - 30	37,4	41,5	29,3	-	32,5	-
3B	Butane G30*	25 - 57,5	80,6	87,3	116,1	45,7	125,8	49,5
3P	Propane G31	25 - 57,5	70,7	76,8	88,0	46,7	95,7	50,4

Flue gas values

Refer to the table below for the permitted flue gas values.

If the CO value is exceeded or the CO_2 values not met,

- the appliance must be re-adjusted by an authorized customer service engineer.
- only operate the appliance during this period for maintenance and installation work.
- ensure there is sufficient ventilation.

The following table shows the required flue gas values:

Type of gas	CO_2	CO
	[%]	[ppm]
Natural gas	8,6 - 9,6	< 500
Propane liquid gas	10,0 - 11,0	< 500
Butane liquid gas	11,7 - 12,7	< 500

Design of the gas installation

The following table shows the construction of the gas installation:

Component	Description
Fixed connection	The appliance is designed to be permanently connected to the customer's gas supply. Position of the gas supply: point J in the connection diagram.
Gas cut-off tap	A gas cut-off tap must be fitted close to the appliance. The gas cut-off tap must not be located within the safety clearance distances.
Gas wall outlet	A gas wall outlet can be used.
Pressure reducer	A pressure reducer must be fitted if the supply flow pressure is too high.

Component	Description
All connection components	All connection components provided by the customer must be tested in accordance with local and national regulations.
Flexible gas pipe	Flexible gas pipes can be installed. If flexible pipes are used, they must be stainless steel pipes approved under local and national regulations. The supply pipe must have a minimum size of 3/4".

Installing the gas supply

Follow the steps below to provide the gas supply for your combi steamer:

Step	Action
1	Measure the supply flow pressure.
2	Compare the type of gas, the gas pressure and the rating for the gas supply connection with the data given on the appliance type plate.
3	Fit a pressure reducer if the supply flow pressure is too high.
4	Fit the gas cut-off tap.
5	Connect the gas supply.
6	Check that all connections inside and outside the appliance are sealed (e.g. using gas detector or leak locator spray). **Caution** Do not spray leak locator spray on the flame-monitor electrical leads.
7	Inform the user that the gas components must be serviced annually.
8	Check the flue gas values: ▪ Carry out a flue gas analysis. ▪ Check that the analysis values lie within the permitted flue gas values given in the table above. ▪ Record the measurements in the appliance.

Gas installation for liquid gas bottles on OGS/OGB appliances

Risk of explosion

⚠DANGER

Risk of explosion from escaping gas

Escaping gas can ignite and cause an explosion.

If you smell gas, follow the instructions below:

- Cut off the gas supply immediately.
- Ventilate the room thoroughly.
- Avoid creating a spark (e.g. by operating a switch, using a phone or touching electrical switching elements).
- Tell the gas supplier or even the fire brigade (external telephone).
- Leave the building together with all other personnel.

Risk of explosion

⚠DANGER

Risk of explosion from excess pressure

Fitting liquid gas bottles incorrectly can result in an explosion because of excess pressure.

Follow the fitting instructions below:

- Always install liquid gas bottles in an upright and stable position.
- Never use liquid gas bottles lying on their side.
- Prevent liquid gas bottles from getting hot.
- Never place liquid gas bottles in the warm air stream from the appliance.

Risk of suffocation

⚠DANGER

Risk of suffocation from lack of air suitable for breathing

Inadequate ventilation at the installation location can lead to suffocation.

Follow the instructions below accordingly:

- Only use the appliance in well ventilated rooms.
- Ensure that there is a sufficient supply of air for the level of combustion.

Class of gas appliance

There are two possible classes of gas appliance for the combi steamers:

Type	Meaning	Usage
B23	Open flues dependent on room air ▪ with fan upstream of the burner and ▪ **without** draught diverter	OGS and OGB appliances are supplied as type B23 gas appliances
B13	Open flues dependent on room air ▪ with fan upstream of the burner and ▪ **with** draught diverter	All appliances can be installed as type B13 appliances by retrofitting a draught diverter (available as an accessory).

Suitable liquid gas bottles

Only those liquid gas bottles suitable for gas take-off must be used for the installation using liquid gas bottles.

The following table shows which liquid gas bottles are suitable:

Type of bottle	Suitability
	suitable
	not suitable

Gas installation procedures

The following points must be observed when installing the gas:

- The gas installation must only be carried out by a qualified gas fitter.
- The gas fitter must not work on those parts sealed by the manufacturer or its authorized agents.
- The gas installation must be performed in accordance with local regulations.
- The gas installation must be performed in accordance with the regulations of the gas supply company.

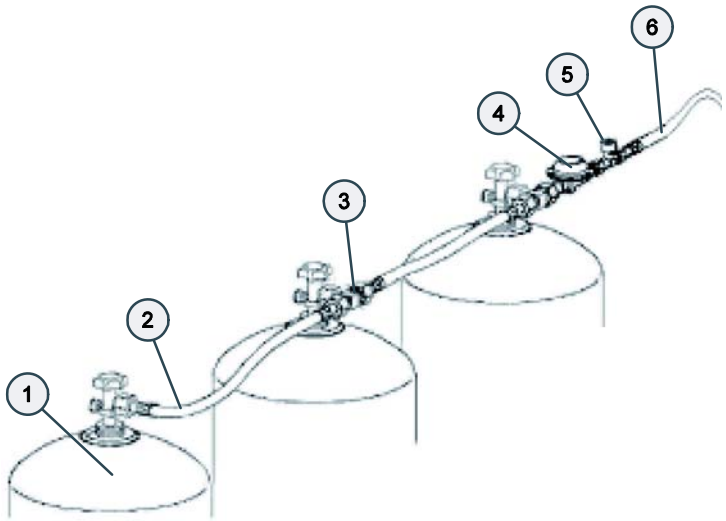
  In Germany these are:
  - Feuerungsanlagenverordnung (FeuVo, FAV = Combustion equipment regulation) for each of the federal states
  - Druckbehälterverordnung including the TRG (Pressurized container regulation plus technical regulations for pressurized gases)
  - Technische Regeln Gasinstallation TRGI (Techncial regulations for gas installation)
  - Technische Regeln Flüssiggas TRF (Technical regulations for liquid gas)
  - Unfallverhütungsvorschrift (UVV) "Verwendung von Flüssiggas" (Accident prevention regulations "Use of liquid gas" (BGV D34/previously VGB 21))
  - Unfallverhütungsvorschrift (UVV) "Gase" (Accident prevention regulations "Gases" (BGV B6/previously VGB 61))
  - Unfallverhütungsvorschrift (UVV) "Arbeiten an Gasleitungen" (Accident prevention regulations "Working on gas pipelines" (BGV D2/previously VGB 50))

Arrangement using a bank of bottles

To avoid severe icing up of the liquid gas bottles, use a bank of bottles containing at least 2 liquid gas bottles.

Caution
Protect the flexible gas lines from chemical, thermal and mechanical damage.

The following drawing and table show the construction of the gas installation using liquid gas bottles:



Item	Description	Requirement	
1	Liquid gas bottle	suitable for gas take-off	
2	HP flexible tube 0.40 m	▪ Medium- or high-pressure pipe ▪ to DIN 4815-1 or DIN3384	
3	T connector	Standard design	
4	Pressure regulator	Standards mark:	to DIN-DVGW or CE mark
		Nominal flow rate Qn:	according to appliance size, see table
		Pressure rating:	PN 16
		Output pressure:	50 mbar
5	Burst pipe protection	Standard design	
6	Flexible gas pipe to appliance	max. 2.00 m long	

Selecting bottles for a bank of bottles

Caution
Open the valve on every bottle in the bank to achieve an even gas take-off from each.
Use the table below to select the correct number of liquid gas bottles for a bank:

Appliance size OGS/OGB	Rating	Gas consumption Liquid gas	Bank of bottles: Number of liquid gas bottles	
	[kW]	[kg/h]	11 kg each	33 kg each
6.10	12	0,9	2	1
6.20	20	1,5	2	1
10.10	30	1,5	2	1
10.20	35	2,7	-	2
12.20	40	3,1	-	2
20.10	40	3,1	-	2
20.20	70	5,4	-	3

Flue gas values

Refer to the table below for the permitted flue gas values.

If the CO value is exceeded or the CO_2 values not met,

- the appliance must be re-adjusted by an authorized customer service engineer.
- only operate the appliance during this period for maintenance and installation work.
- ensure there is sufficient ventilation.

The following table shows the required flue gas values:

Type of gas	CO_2	CO
	%	ppm
Propane liquid gas	10,0 - 11,0	< 500
Butane liquid gas	11,7 - 12,7	< 500

Installing the gas supply

Follow the steps below to provide the gas supply for your combi steamer:

Step	Action
1	Measure the supply flow pressure.
2	Compare the type of gas, the gas pressure and the rating for the gas supply connection with the data given on the appliance type plate.
3	Fit a pressure reducer if the supply flow pressure is too high.
4	Fit the gas cut-off tap.
5	Connect the gas supply.
6	Check that all connections inside and outside the appliance are sealed (e.g. using gas detector or leak locator spray). **Caution** Do not spray leak locator spray on the flame-monitor electrical leads.
7	Inform the user that the gas components must be serviced annually.
8	Check the flue gas values: ▪ Carry out a flue gas analysis. ▪ Check that the analysis values lie within the permitted flue gas values given in the table above. ▪ Record the measurements in the appliance.

Flue gas removal system for OGS/OGB appliances

Risk of explosion

⚠DANGER

Risk of explosion from escaping gas

Escaping gas can ignite and cause an explosion.

If you smell gas, follow the instructions below:

- ▶ Cut off the gas supply immediately.
- ▶ Ventilate the room thoroughly.
- ▶ Avoid creating a spark (e.g. by operating a switch, using a phone or touching electrical switching elements).
- ▶ Tell the gas supplier or even the fire brigade (external telephone).
- ▶ Leave the building together with all other personnel.

Risk of suffocation

⚠DANGER

Risk of suffocation from lack of air suitable for breathing

Inadequate ventilation at the installation location can lead to suffocation.

Follow the instructions below accordingly:

- ▶ Only use the appliance in well ventilated rooms.
- ▶ Ensure that there is a sufficient supply of air for the level of combustion.

Combustion gases in gas appliances

Gas appliances produce combustion gases that must be vented to the outside air via a suitable flue gas removal system.

Appliances must be installed in a room having adequate ventilation to prevent noxious combustion gases reaching harmful concentration levels in the room.

Flue gas temperature

The temperature of the undiluted flue gas can reach 400°C.

Follow fire safety regulations.

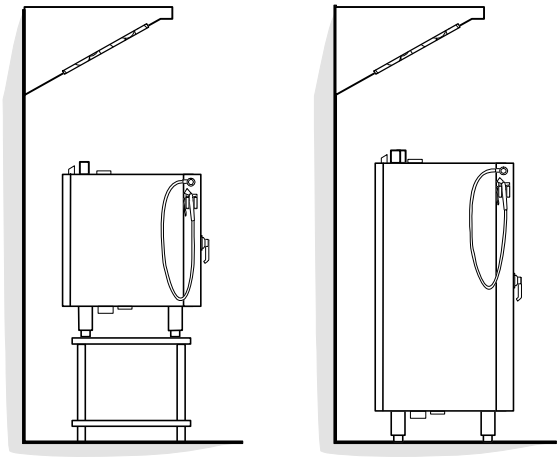
Gas appliance under an extractor hood

The combi steamer can be installed under a fume extractor hood.

Make sure that a safety device is fitted that guarantees the following requirement:

- The gas supply to the burner must only be allowed to flow when the extraction system is running.

The following diagram shows the combi steamer beneath the fume extractor hood:



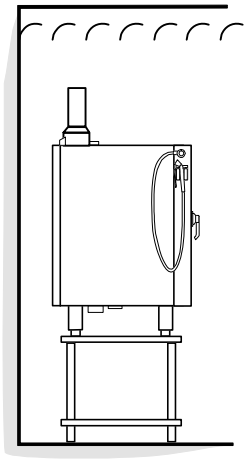
Gas appliance under a ceiling fitted with ventilation equipment (option)

Combi steamers fitted with a draught diverter (type B13 gas appliance, option) can be fitted under a ceiling containing ventilation equipment.

Make sure that a safety device is fitted that guarantees the following requirement:

- The gas supply to the burner must only be allowed to flow when the extraction system is running.

The following diagram shows the combi steamer beneath a ceiling fitted with ventilation equipment:



Gas appliance connected directly to a flue

Combi steamers fitted with a draught diverter (type B13 gas appliance, option) can be connected directly to the flue.

Follow the steps below to connect your combi steamer to the flue:

Step	Action
1	Use an approved registered chimney sweep to clean the flue system. Ensure you obtain a record of this work.
2	Secure the appliance mechanically to prevent movement.
3	The gas flue pipes must be sealed and fitted in accordance with local and national regulations.
4	Inform the user that the flue system must be cleaned regularly.

Instructions for the user

Advise the user of the following points:

- The gas flue pipe, its seal (rear left) and flue gases may be very hot. Flue gases and hot sheet metal parts can cause burns.
- The hand shower must only be used for cleaning inside the oven. The hand shower must not be used to clean the outside of the case. Do not spray it onto gas supply connections, ventilation holes or flue gas outlets.
- Do not fit any combustible materials above the appliance or place them on the appliance. They present a fire risk.

Safety precautions for gas appliances

Risk of explosion

⚠DANGER

Risk of explosion from escaping gas

Escaping gas can ignite and cause an explosion.

If you smell gas, follow the instructions below:

- ▶ Cut off the gas supply immediately.
- ▶ Ventilate the room thoroughly.
- ▶ Avoid creating a spark (e.g. by operating a switch, using a phone or touching electrical switching elements).
- ▶ Tell the gas supplier or even the fire brigade (external telephone).
- ▶ Leave the building together with all other personnel.

Risk of suffocation

⚠DANGER

Risk of suffocation from lack of air suitable for breathing

Inadequate ventilation at the installation location can lead to suffocation.

Follow the instructions below accordingly:

- ▶ Only use the appliance in well ventilated rooms.
- ▶ Ensure that there is a sufficient supply of air for the level of combustion.

Combustion air supply for gas appliances

Ensure there is an adequate supply of combustion air.

Please note the following points:

- The amount of combustion air required depends on the rated gas consumption.
- In rooms in which the total heat output rating of all gas appliances is less than 50 kW, it is permitted to rely on fresh air coming through gaps or windows to supply the combustion air.

Technical regulations

In Germany the following technical regulations must be observed:

- Technische Regeln Flüssiggas TRF (Technical regulations for liquid gas)
- DWGW Arbeitsblatt G600 (DWGW worksheet)
- DWGW Arbeitsblatt G634 (DWGW worksheet)
- VBG 21
- Accident prevention regulation "Use of liquid gas"
- VDI Directive 2052: Kitchen air conditioning and ventilation systems

Approvals

Notification of the installation

Notify the following bodies (where necessary) of the installation that has been made:

- Gas supply company
- Building inspection office
- Registered chimney sweep
- Industrial inspectorate

Installing the utility services

All work on customer facilities (electric/gas/water/waste water) must only be carried out by the relevant utility company or by a registered installation company.

Statutory regulations

The relevant statutory regulations and building regulations must be observed.

6 Preparing for use

Purpose of this chapter

This chapter explains how to prepare your combi steamer for use.

Contents

This chapter includes the following topics:

	Page
Procedure for preparing the appliance for use	57
Taking out of service and disposal	59

Procedure for preparing the appliance for use

Prior to putting the appliance into use

Before putting the appliance into use

- Run through the checklists and safety instructions in the user manual and installation manual.
- Read the chapter on setting up (*Setting up the appliance* on page 33) and connection *(Connecting up the combi steamer on page 33).*

Never install or put into service a damaged appliance under any circumstances.

Preparing for use

To prepare the combi steamer for use, follow the steps below:

Step	Action
1	Ensure that the ambient temperature is higher than +4°C.
2	Reset the safety temperature limiter if necessary.
3	Open the water tap(s).
4	OGS/OGB: ▪ Start the room ventilation system running. ▪ Open the gas tap.
5	Check that the following are seated properly and in the correct position: ▪ suction panel ▪ racks ▪ Loading trolley
6	Switch on the combi steamer at the main power switch.
7	Set the following: ▪ date ▪ time ▪ language Refer to the user manual for instructions on this.
8	Select the *Superheated steam* cooking program: ▪ Set 150°C and 10 minutes. Refer to the user manual for instructions on this.
9	Check that the interior oven light is working.
10	Check ignition for the following gas burners: ▪ OGS: burner for oven heater ▪ OGB: burner for over heater and burner for steam generator
11	OGS/OGB: ▪ Make sure the appliance is running within the specified flue gas levels (*Gas installation to a fixed connection on OGS/OGB appliances on page 44).*
12	OES and OGS: ▪ Run the appliance in *Steam* mode. ▪ Use the pressure regulator to adjust the water supply reading for the steam generator to the pressures in the table below:
13	Appliance with automatic cleaning: ▪ Start automatic cleaning. ▪ Check the supply of CONVOClean and CONVOCare.

OES and OGS	Water pressure
6.10, 6.20, 10.10, 10.20, 12.20	100 kPa (1.0 bar)
20.10 and 20.20	180 kPa (1.8 bar)

Customer guidance and instruction.

Instruct the user in all safety-related functions and devices. Instruct the user in how to operate the appliance.

Taking out of service and disposal

Taking out of service

Requirements:

- The appliance must be disconnected from the electrical supply
- The gas supply must be cut off
- The water supply must be cut off

To take your combi steamer out of service, perform the installation steps in the reverse order.

The following tasks must be performed correctly:

- Disconnecting the water supply from the appliance
- Removing the waste water connection from the appliance
- Disconnecting or isolating the electrical supply.
- Removing the door catch
- plus for OGS/OGB appliances:
  - Disconnecting the gas supply from the appliance
  - Disconnecting the gas flue system if applicable

Disposal

Contact the manufacturer for guidance on environmentally safe disposal of your combi steamer. The manufacturer is certified to the ISO 14001 environmental management standard.

7 Optional equipment

Purpose of this chapter

This chapter explains how to put the optional equipment of your combi steamer into service.

Contents

This chapter includes the following topics:

	Page
CONVOClean automatic interior oven cleaning system	61
Ship model	64
Grill version	65
Stacking kit	67
Communications interface	68
Extractor hood/condensation hood	69

CONVOClean automatic interior oven cleaning system

Cleaning agents coming into contact with food

⚠WARNING

Risk of cleaning agents coming into contact with food

If the CONVOClean and CONVOCare connections are swapped over, there is a health risk from eating the cooked dishes.

- ▶ Make sure that CONVOClean and CONVOCare are connected correctly.
- ▶ Use only products approved by the manufacturer.

Requirements

Make sure that the following requirements have been met:

- Soft water supply connected as specified in the "Water supply" section
- Water pressure (flow pressure) > 300 kPa and < 600 kPa (> 3 bar and < 6 bar)
- Drain connected as specified in the "Water drain" section
- Water hardness > 5 dH and < 7 dH

Included with the appliance

The following table shows the parts included with the CONVOClean *system:*

No.	Name		
1	Delivery tube for cleaner suction nozzle (tube color: red)	2617594	1
2	Delivery tube for nozzle-detergent suction nozzle (tube color: transparent)	2617598	1
3	D10 wire clip	8009058	2
4	CONVOClean forte 10 ltr. (for manual cleaning and stubborn dirt)	3007017	1
5	CONVOClean new 10 ltr. (for all cleaning systems for light to heavy soiling)	3007015	1
6	CONVOCare concentrate 1 ltr. (nozzle detergent)	3007028	1
7	an empty CONVOCare canister	3007029	1

Cleaning agent and detergent

Only the specified materials must be used. This is the only way to ensure reliable and effective cleaning. You can obtain CONVOClean forte and CONVOCare from your distributor or ask the manufacturer.

The following table shows the approved cleaning agent and detergent:

Name	Product
Cleaning agents	CONVOClean forte
nozzle detergent	CONVOCare

Cleaning agent and detergent consumption

The table below shows the cleaning agent and detergent consumption in liters per cleaning cycle for cleaning level 3:

Material	Appliance size	Consumption (liters)
CONVOClean forte	6.10 / 6.20 / 10.10 / 10.20	0,90
CONVOCare	6.10 / 6.20 / 10.10 / 10.20	0,25
CONVOClean forte	12.20 / 20.10 / 20.20	1,40
CONVOCare	12.20 / 20.10 / 20.20	0,25

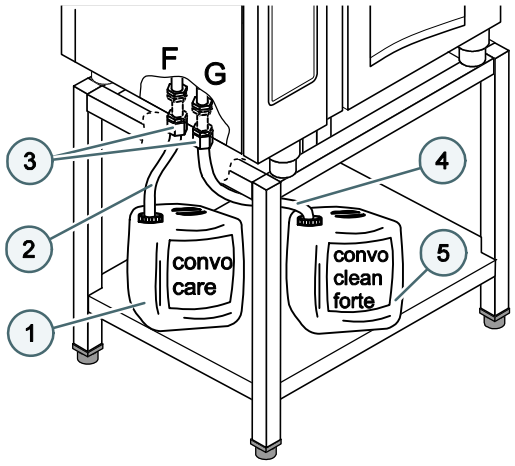
Installation location for the cleaning agent and detergent canisters

Install the canisters as follows:

- The canisters should be located for easy access beside the appliance on a flat surface.
- Check the fluid level in the canisters regularly.
- The canisters must not be positioned above the level of the surface on which the appliance stands.
- The level of the surface on which the canisters stand must not lie more than 1 m below the tube connections on the appliance.

Arrangement of the cleaning-agent and detergent supply system:

The following diagram shows the arangement of the cleaning-agent and detergent supply system:



Label	Name
1	CONVOCare nozzle detergent canister
2	Delivery tube for nozzle-detergent suction nozzle (tube color: transparent)
3	D10 wire clip
4	Delivery tube for cleaner suction nozzle (tube color: red)
5	CONVOClean forte cleaning agent canister
F	Appliance connector for nozzle detergent supply
G	Appliance connector for cleaning agent supply

Mixing the CONVOCare solution

To avoid excessive foaming, follow the procedure below when mixing the CONVOCare concentrate with water:

Step	Action
1	Have available: ▪ an empty CONVOCare canister ▪ CONVOCare concentrate ▪ a sufficient amount of **soft water**
2	Connect the cold water supply to the hand shower.
3	Read the label on the CONVOCare concentrate canister for the mixing instructions.
4	First add the water to the empty canister.
5	Add the correct amount of CONVOCare concentrate to the water.
6	Mix the two together thoroughly by stirring.

Connecting the CONVOClean system

Follow the steps below to connect the CONVOClean *system*:

Step	Action
1	Mix the supplied CONVOCare concentrate with **soft water** in the empty CONVOCare canister. Follow the instructions above for mixing the CONVOCare solution.
2	Plug the red extractor tube (4) for the cleaning agent onto the connector nipple of the front tube fitting (G) and hold in place with the wire clip (3).
3	Plug the transparent extractor tube (2) for the detergent onto the connector nipple of the front tube fitting (F) and hold in place with the wire clip (3).
4	Plug the red suction nozzle into the canister of CONVOClean forte (5). There must be no kinks in the tube and the vent hole in the canister must be open and unblocked.
5	Plug the transparent suction nozzle into the canister of CONVOCare (1). There must be no kinks in the tube and the vent hole in the canister must be open and unblocked.
6	Inform the user that the appliance must not be opened during cleaning. There is a risk of chemical burns to the eyes.

Optional customization

As an option, automatic cleaning can be customized to suit the user's requirements by a trained service engineer with access to the Service level in the user interface.

Ship model

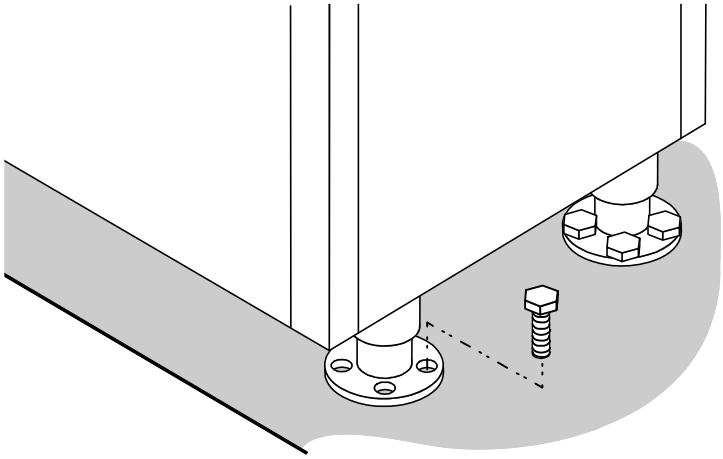
Function

On board ship, the combi steamer is fixed to the floor by screws.

Fixing by flanged feet

Caution
If the appliance is fixed by means other than the flanged feet (e.g. by welding), the appliance must be leveled before fixing.

The following diagram shows how you can fix floor-standing appliances or table-top appliances using the flanged feet:



Fixing to the ship oven-stand

To fix the combi steamer to a ship oven-stand, follow the steps below:

Step	Action
1	Using a spirit level, ensure the ship oven-stand is horizontal by adjusting the height of the feet.
2	Align the fixing bracket with the oven stand via the slotted holes and screw it to the oven stand.
3	Fasten the fixing bracket to the floor.
4	Remove the appliance feet with flange plate from the combi steamer.
5	Fit the M8 threaded feet supplied to the base.
6	Place the combi steamer on the oven stand and position the feet over the holes in the oven stand.
7	Using a spirit level, ensure the appliance is horizontal by adjusting the height of the feet.
8	Screw the square tubing of the oven stand to the appliance feet from below using the screws, plain washers and spring washers supplied.

Grill version

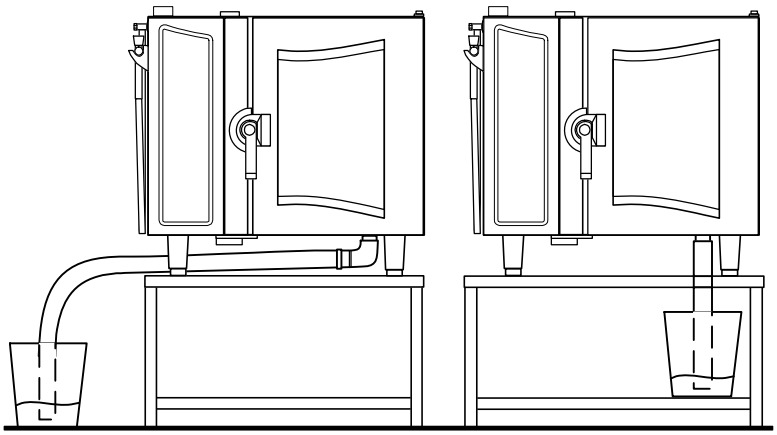
Design and function

The grill version has a separate fat run-off. Intermediate plates prevent seasoning being washed off by drops of liquid from above.

A fat collecting tray collects any liquid dripping off the grilled food, which then flows out through a drain hole and tube directly into an external fat collecting container. The fat collecting container contains water up to the level of the tube end. This ensures the closed system inside the combi steamer is maintained.

If the combi steamer is not being used for grilling, the fat collecting tray and the intermediate plates should be removed from the appliance and the fat drain hole sealed with a screw plug.

The following diagram shows the design of the fat drain system in the grill version:



Included with the appliance

The following table shows the parts included with the grill version:

No.	Name	Part no.	Qty per appliance	
			6.10	10.10
1	Intermediate plate for chicken grill	On request	1	2
2	Chicken grill mesh		2	3
3	Fat collecting tray		1	1
4	Pipe bend		1	1
5	Tube with screw connector. Use longer or shorter tube as required (tube + hose clip + tube clamp)		1	1
6	Screw plug for fat drain hole		1	1

Connecting the grill version to fat collecting container when container placed beneath the combi steamer

To connect the fat collecting container under the appliance, follow the steps below:

Step	Action
1	Place the fat collecting container (e.g. metal pail approx .10 - 15 liters) in a stable position under the appliance.
2	Screw the tube connector onto the threaded outlet of the fat drain under the appliance base.
3	Feed the tube down into the fat collecting container, avoiding any kinks.

Connecting the grill version to fat collecting container when container placed beside the combi steamer

To connect the fat collecting container beside the appliance, follow the steps below:

Step	Action
1	Place the fat collecting container (e.g. metal pail approx .10 - 15 liters) in a stable position beside the appliance.
2	Screw the pipe bend onto the threaded outlet of the fat drain under the appliance base.
3	Screw the tube connector onto the pipe bend.
4	Feed the tube down into the fat collecting container, avoiding any kinks.

Preparing for use

To set up the fat collecting container for use, follow the steps below:

Step	Action
1	Fill the fat collecting container with about 5 cm of water so that the tube mouth lies under the surface of the water. Make sure that the fat can drain freely into the fat collecting container.
2	Unscrew the plug from the drain outlet in the appliance base.
3	Slide the fat collecting tray into the appliance (do not slide into the rack but insert directly on the oven floor). **Caution:** The drain from the fat collecting tray must lie over the center of the fat drain outlet in the oven floor.
4	Insert the intermediate plates.
5	After preheating, place the chicken grills (with chicken on top) in the oven.
6	Inform the user that there must always be water in the fat collecting container (above the level of the tube mouth). Otherwise the closed system inside the oven is unable to work.
7	Inform the user that the fat collecting tray must be removed from the appliance and the screw plug inserted in the fat drain outlet before ▪ every automatic cleaning cycle. ▪ every automatic steam generator rinse. ▪ any cleaning operation using the hand shower.

Applications that are not permitted

When the plug in the fat drain outlet is unscrewed, it is not permitted to operate the appliance as follows:

- Without a fixed connection to the fat drain outlet
- With the fluid running off into an open container beneath the appliance
- Without an initial amount of fluid in the fat collecting container

The manufacturer accepts no liability for any damage caused by incorrect installation.

Stacking kit

Function

The stacking kit can be used to place two combi steamers one above the other.

Permitted combinations

Caution
Never place a size 10.10 or 10.20 appliance on top.

You can only install electric appliances on electric appliances and gas appliances on gas appliances.

The following combinations are allowed:

- 6.10 on 6.10
- 6.10 on 10.10
- 6.20 on 6.20
- 6.20 on 10.20

Potential equalization

Incorporate the stacking kit in the potential equalization system.

Assembly and installation

Please refer to the "Service" manual for information on assembling the "Electric appliance" and "Gas appliance" stacking kits.

Please refer to the separate instructions for information on installation.

Communications interface

Serial interface

All combi steamers are fitted with an EIA-232 (RS-232) communications interface.

A special interface cable is required to connect a PC via the built-in EIA-232 (RS232) interface.

Function of the communications interface

The communications interface is used for networking a computer and combi steamer.

The CONVOHACCP software can be used for automatic logging and subsequent documentation of all cooking processes.

In addition, the CONVOControl software can be used to edit recipes and transfer them to and from the combi steamer.

Modules for the network connection

A separate communications module is required for connecting a combi steamer to a network. There are two models.

The following table shows the two communications modules together with the interfaces:

	Module A	Module B
Interfaces	▪ EIA-232 (RS232) (Connected using standard commercial 9-pin connector.) ▪ EIA-485 (RS-485) ▪ USB interface	▪ EIA-232 (RS232) (Connected using standard commercial 9-pin connector.) ▪ EIA-485 (RS-485) ▪ USB interface ▪ Ethernet/LAN

Requirements

Firmware version V4.12 and above and CONVOHACCP support the use of the USB and Ethernet interfaces.

installation

Refer to the installation instructions for the communications modules for further details.

Extractor hood/condensation hood

Recommended extractor hoods/condensation hoods

An extractor hood is not a strict stipulation for operating the combi steamer.

If you plan to fit an extractor hood, we recommend the CONVOTHERM Extractor hood (extractor hood) or the CONVOTHERM Condensation hood without extractor pipe and with cold water supply and water drain.

Requirements

- The appliance must be placed in a stable position before mounting a hood on an appliance. This is particularly relevant for combi steamers installed on an oven stand with wheels.
- Ensure that there is a sufficient supply of air.
- Local and national regulations relating to requirements of air conditioning equipment must be followed.

Grease filters

Fit grease filters in the overhanging hood section.

Grease filters must be removed at regular intervals and washed in the dishwasher. Observe manufacturer's data.

Operation

Always switch the hood on when the combi steamer is running. Otherwise condensation may collect in the appliance.

Moving the appliance

Remove the extractor hood prior to moving.

Table-top appliances with oven stand must be screwed firmly onto the oven rack.

Technical data

The table below contains the technical specification for extractor hoods:

Appliance size	6.10	6.20	10.10	10.20
Part no. Extractor hood for OEB/OES electric appliances	3416801	3416821	3416801	3416821
Part no. Extractor hood for OGB gas appliances	3416871	3416872	3416873	3416881
Part no. Extractor hood for OGS gas appliances	3416860	3416874	3417015	3416875
Dimensions W x D x H [mm]	905 x 1160 x 414	1190 x 1385 x 414	905 x 1160 x 414	1190 x 1385 x 414
Rated voltage	1/N/PE AC 230V 50/60 Hz			
Fuse	16A			
Degree of protection*	IPX4			
Fan extraction rate for Δ=1.2 kg/m³	1450 m³/h with no extractor pipe connected			
Fan extraction rate for Δ=1.2 kg/m³	1390 m³/h at p= 8mmWS			
Fan extraction rate for Δ=1.2 kg/m³	1100 m³/h at p= 16mmWS			
Material	Stainless steel			

*The IPX4 degree of protection of the extractor hood does not include the connection between the power cord and earthed socket.

8 Technical data, dimensional drawings and connection diagrams

Purpose of this chapter

This chapter contains the technical data, dimensional drawings and connection diagrams for your combi steamer.

Contents

This chapter includes the following topics:

	Page
Technical data	71
Dimensions, dimensional drawings and connection diagrams	90

8.1 Technical data

Purpose of this chapter

This chapter contains the technical data for your combi steamer.

Contents

This chapter includes the following topics:

	Page
Technical data for OEB	72
Technical data for OES	76
Technical data for OGS	80
Technical data for OGB	84
Technical data for accessories	89

Technical data for OEB

Dimensions and weights

The following table shows appliance dimensions and weights:

OEB		**6.10**	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
		Table-top appliances				**Floor-standing appliances**		
Width						including loading trolley		
with packaging	[mm]	1130	1410	1130	1410	1435	1150	1435
without packaging	[mm]	932	1217	932	1217	1232	947	1232
Depth [mm]						including loading trolley		
with packaging	[mm]	950	1175	950	1175	1200	1000	1200
without packaging	[mm]	805	1027	805	1027	1055	855	1055
Height [mm]						including loading trolley		
with packaging	[mm]	1040	1105	1310	1330	1650	2185	2185
without packaging	[mm]	852	895	1120	1120	1416	1952	1952
Weight						including loading trolley		
with packaging	[kg]	190	256	220	312	376	372	492
without packaging	[kg]	155	215	175	245	314	315	414
Weight with ConvoClean *system*						including loading trolley		
with packaging	[kg]	210	276	240	332	396	392	512
without packaging	[kg]	163	223	183	253	322	323	422
Safety clearances [mm]								
Rear	[mm]	50						
Right-hand side	[mm]	50						
Left-hand side	[mm]	100						
Above	[mm]	500 (for ventilation)						

Electrical installed load ratings

The following table shows the electrical installed load ratings:

OEB		**6.10**	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
		Table-top appliances				**Floor-standing appliances**		
3/N/PE ~ 400V 50/60Hz								
Rated power consumption	[kW]	11,4	19,8	19,8	34,3	34,3	39,6	68,5
Convection power	[kW]	10,5	18,9	18,9	33,0	33,0	37,8	66,0
Steam power	[kW]	9,9	16,5	16,5	26,4	29,7	29,7	39,6
Motor power	[kW]	0,8	0,8	0,8	1,2	1,2	1,7	2,4
Rated current	[A]	15,3	26,3	26,3	47,6	47,6	52,4	95,0
max. permissible system impedance Z_{sys}	[Σ]	0,627	0,252	0,252	0,113	0,113	0,125	-
Fuse	[A]	16,0	35,0	35,0	50,0	50,0	63,0	100,0
recommended wire cross-section*	[mm^2]	5x 4	5x 6	5x 6	5x 16	5x 16	5x 16	5x 35

OEB		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
3/PE ~ 230V 50/60Hz								
Rated power consumption	[kW]	11,7	20,1	20,1	34,6	34,6	40,1	69,1
Convection power	[kW]	10,5	18,9	18,9	33,0	33,0	37,8	66,0
Steam power	[kW]	9,9	16,5	16,5	26,4	29,7	29,7	39,6
Motor power	[kW]	0,8	0,8	0,8	1,5	1,5	2,2	3,0
Rated current	[A]	27,2	46,2	46,2	83,5	83,5	92,3	166,9
max. permissible system impedance Z_{sys}	[Σ]	0,239	0,151	0,151	-	-	-	-
Fuse	[A]	16,0	35,0	35,0	50,0	50,0	63,0	100,0
recommended wire cross-section*	[mm^2]	5x 6	5x 16	5x 16	5x 35	5x 35	5x 35	5x 95
3/PE ~ 200V 50/60Hz								
Rated power consumption	[kW]	11,7	20,1	20,1	34,6	34,6	40,1	69,1
Convection power	[kW]	10,5	18,9	18,9	33,0	33,0	37,8	66,0
Motor power	[kW]	1,1	1,1	1,1	1,5	1,5	2,2	3,0
Steam power	[kW]	9,9	16,5	16,5	26,4	29,7	29,7	39,6
Rated current	[A]	30,8	52,7	52,7	95,4	95,4	105,2	190,6
max. permissible system impedance Z_{sys}	[Σ]	0,239	0,151	0,151	-	-	-	-
Fuse	[A]	16,0	35,0	35,0	50,0	50,0	63,0	100,0
recommended wire cross-section*	[mm^2]	5x 6	5x 16	5x 16	5x 35	5x 35	5x 35	x 95
Heat output								
latent	[kJ/h]	2100	3500	3500	6400	6900	6900	12200
sensible	[kJ/h]	2500	4500	4500	7800	7800	8900	15400

*recommended conductor cross-section for wires laid uncovered in air up to 5 m in length.

***recommended conductor cross-section for wires laid uncovered in air up to 5 m in length.**

Water supply and water quality

The following table shows the values for the water supply and water quality:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Water supply (cold only)							
Shut-off valve	with non-return valve and dirt filter						
Water intake	G 3/4", permanent connection optional with min. 3/8" supply pipe						
Flow pressure							
without ConvoClean *system*	2 - 6 bar						
with ConvoClean *system*	3 - 6 bar						
Drinking water quality (install water treatment unit if necessary)							
Overall hardness	5 - 15	°dH	(German degrees of hardness)				
	9 - 13	°fH	(French degrees of hardness)				

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances		Floor-standing appliances				
	6,3 - 8,8	°eH	(English degrees of hardness)				
	90 - 120	ppm	(USA)				
pH	6,5 - 8,5						
Conductivity	10 - 200 µS/cm						
Cl^-	max. 100 mg/l						
SO_4^-	max. 400 mg/l						
Fe	max. 0.1 mg/l						
Mn	max. 0.05 mg/l						
Cu	max. 0.05 mg/l						
Cl_2	max. 0.1 mg/l						
Water drain							
Type	DN 50, permanent connection or funnel waste trap						

Water hardness

The following table shows the approved minimum and maximum water hardness:

	min.	max.
°dH (German degrees of hardness)	5,0	18,0
°fH (French degrees of hardness)	9,0	33,0
°eH (English degrees of hardness)	6,3	23,0
ppm (USA)	90,0	320,0

Water consumption

The following table shows the water consumption of the combi steamer:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Water consumption								
Total (guide value)	[l/h]	20-30	30-50	30-50	40-70	50-80	60-80	80-100
Max. consumption for appliance without automatic interior oven cleaning	[l/min]	6	6	6	6	6	6	6
Max. consumption for appliance with automatic interior oven cleaning	[l/min]	11	11	11	11	11	11	11

Hydrogen ion exchanger

The following table shows the flow rate required for the hydrogen ion exchanger:

		Table-top appliances			Floor-standing appliances			
		6.10	6.20	10.10	10.20	12.20	20.10	20.20
OEB/OGB	**[l/min]**	0,2	0,4	0,4	0,6	0,7	0,7	1,0
OES/OGS	**[l/min]**	0,15	0,2	0,2	0,2	0,3	0,5	0,5

The water consumption may increase significantly if the moisture removal option is used frequently.

Steam generator

The following table shows the nominal output and capacity of the stream generator:

OEB		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Rated output (guide value)	[kg/h]	12,6	21,0	21,0	31,4	37,8	37,8	50,4
Contents	[liters]	6,5	9,0	9,0	12,5	12,5	12,5	17,0

Appliance technical standards

The following table shows the technical standards for the appliance:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Degree of protection	IPX5						
Approval mark	TÜV, GS, DIN GOST TÜV, SVGW, WRAS, UL, NSF Approval marks are only present on the device based on country-specific regulations.						
Noise emission							
measured	< 70 dBA						

Technical data for OES

Dimensions and weights

The following table shows appliance dimensions and weights:

OES		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Width						including loading trolley		
with packaging	[mm]	1130	1410	1130	1410	1435	1150	1435
without packaging	[mm]	932	1217	932	1217	1232	947	1232
Depth						including loading trolley		
with packaging	[mm]	950	1175	950	1175	1200	1000	1200
without packaging	[mm]	805	1027	805	1027	1055	855	1055
Height						including loading trolley		
with packaging	[mm]	1040	1105	1310	1330	1650	2185	2185
without packaging	[mm]	852	895	1120	1120	1416	1952	1952
Weight						including loading trolley		
with packaging	[kg]	176	246	206	280	362	362	482
without packaging	[kg]	136	196	165	225	288	295	395
Weight with ConvoClean *system*						including loading trolley		
with packaging	[kg]	196	266	226	300	382	382	502
without packaging	[kg]	144	204	173	233	296	303	403
Safety clearances								
Rear	[mm]	50						
Right-hand side	[mm]	50						
Left-hand side	[mm]	100						
Above	[mm]	500 (for ventilation)						

Electrical installed load ratings

The following table shows the electrical installed load ratings:

OES		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
3/N/PE ~ 400V 50/60Hz								
Rated power consumption	[kW]	11,4	19,8	19,8	34,3	34,3	39,6	68,5
Convection power	[kW]	10,5	18,9	18,9	33,0	33,0	37,8	66,0
Motor power	[kW]	0,8	0,8	0,8	1,2	1,2	1,7	2,4
Rated current	[A]	15,3	26,3	26,3	47,6	47,6	52,4	95,0
max. permissible system impedance Z_{sys}	[Σ]	0,627	0,252	0,252	0,113	0,113	0,125	-
Fuse	[A]	16,0	35,0	35,0	50,0	50,0	63,0	100,0
recommended wire cross-section*	[mm^2]	5x 4	5x 6	5x 6	5x 16	5x 16	5x 16	5x 35
3/PE ~ 230V 50/60Hz								
Rated power consumption	[kW]	11,7	20,1	20,1	34,6	34,6	40,1	69,1

OES		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Convection power	[kW]	10,5	18,9	18,9	33,0	33,0	37,8	66,0
Motor power	[kW]	0,8	0,8	0,8	1,5	1,5	2,2	3,0
Rated current	[A]	27,2	46,2	46,2	83,5	83,5	92,3	166,9
max. permissible system impedance Z_{sys}	[Σ]	0,239	0,151	0,151	-	-	-	-
Fuse	[A]	16,0	16,0	35,0	50,0	50,0	63,0	100,0
recommended wire cross-section*	[mm^2]	5x 6	5x 16	5x 16	5x 35	5x 35	5x 35	5x 95
3/PE ~ 200V 50/60Hz								
Rated power consumption	[kW]	11,7	20,1	20,1	34,6	34,6	40,1	69,1
Convection power	[kW]	10,5	18,9	18,9	33,0	33,0	37,8	66,0
Motor power	[kW]	1,1	1,1	1,1	1,5	1,5	2,2	3,0
Rated current	[A]	30,8	52,7	52,7	95,4	95,4	105,2	190,6
max. permissible system impedance Z_{sys}	[Σ]	0,239	0,151	0,151	-	-	-	-
Fuse	[A]	16,0	16,0	35,0	50,0	50,0	63,0	100,0
recommended wire cross-section*	[mm^2]	5x 6	5x 16	5x 16	5x 35	5x 35	5x 35	5x 95
Heat output								
latent	[kJ/h]	2100	3500	3500	6400	6900	6900	12200
sensible	[kJ/h]	2500	4500	4500	7800	7800	8900	15400

*recommended conductor cross-section for wires laid uncovered in air up to 5 m in length.

Water supply and water quality

The following table shows the values for the water supply and water quality:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Water supply (cold only)							
Shut-off valve	with non-return valve and dirt filter						
Water intake	G 3/4", permanent connection optional with min. 3/8" supply pipe						
Flow pressure							
without ConvoClean *system*	2 - 6 bar						
with ConvoClean *system*	3 - 6 bar						
Drinking water quality (install water treatment unit if necessary)							
Overall hardness	5 - 15	°dH	(German degrees of hardness)				
	9 - 13	°fH	(French degrees of hardness)				
	6,3 - 8,8	°eH	(English degrees of hardness)				
	90 - 120	ppm	(USA)				
pH	6,5 - 8,5						
Conductivity	10 - 200 µS/cm						
Cl^-	max. 100 mg/l						
SO_4^-	max. 400 mg/l						
Fe	max. 0.1 mg/l						

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Mn	max. 0.05 mg/l						
Cu	max. 0.05 mg/l						
Cl_2	max. 0.1 mg/l						
Water drain							
Type	DN 50, permanent connection or funnel waste trap						

Water hardness

The following table shows the approved minimum and maximum water hardness:

	min.	max.
°dH (German degrees of hardness)	5,0	7,0
°fH (French degrees of hardness)	9,0	13,0
°eH (English degrees of hardness)	6,3	8,8
ppm (USA)	90,0	125,0

Water consumption

The following table shows the water consumption of the combi steamer:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Water consumption								
Total (guide value)	[l/h]	20-30	30-50	30-50	40-70	50-80	60-80	80-100
Max. consumption for appliance without automatic interior oven cleaning	[l/min]	6	6	6	6	6	6	6
Max. consumption for appliance with automatic interior oven cleaning	[l/min]	11	11	11	11	11	11	11

Hydrogen ion exchanger

The following table shows the flow rate required for the hydrogen ion exchanger:

		Table-top appliances			Floor-standing appliances			
		6.10	6.20	10.10	10.20	12.20	20.10	20.20
OEB/OGB	**[l/min]**	0,2	0,4	0,4	0,6	0,7	0,7	1,0
OES/OGS	**[l/min]**	0,15	0,2	0,2	0,2	0,3	0,5	0,5

The water consumption may increase significantly if the moisture removal option is used frequently.

Appliance technical standards

The following table shows the technical standards for the appliance:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				**Floor-standing appliances**		
Degree of protection	IPX5						
Approval mark	TÜV, GS, DIN GOST TÜV, SVGW, WRAS, UL, NSF Approval marks are only present on the device based on country-specific regulations.						
Noise emission							
measured	< 70 dBA						

Technical data for OGS

Dimensions and weights

The following table shows appliance dimensions and weights:

OGS		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Width						including loading trolley		
with packaging	[mm]	1130	1410	1130	1410	1435	1150	1435
without packaging	[mm]	932	1217	932	1217	1232	947	1232
Depth [mm]						including loading trolley		
with packaging	[mm]	950	1175	950	1175	1200	1000	1200
without packaging	[mm]	805	1027	805	1027	1055	855	1055
Height [mm]						including loading trolley		
with packaging	[mm]	1040	1105	1310	1330	1650	2185	2185
without packaging	[mm]	852	895	1120	1120	1416	1952	1952
Weight						including loading trolley		
with packaging	[kg]	188	254	220	310	380	372	492
without packaging	[kg]	155	215	173	250	320	315	404
Weight with ConvoClean *system*						including loading trolley		
with packaging	[kg]	208	274	240	330	400	392	512
without packaging	[kg]	163	223	181	258	328	323	413
Safety clearances								
Rear	[mm]	50						
Right-hand side	[mm]	50						
Left-hand side	[mm]	100						
Above	[mm]	500 (for ventilation)						

Electrical installed load ratings

The following table shows the electrical installed load ratings:

OGS		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
3/N/PE ~ 400V 50/60Hz								
Rated power consumption	[kW]	1,1	1,1	1,1	1,4	1,4	2,1	2,1
Rated current	[A]	2,5	2,5	2,5	3,2	3,2	4,7,	5,0
Fuse	[A]	16,0	16,0	16,0	16,0	16,0	16,0	16,0
recommended wire cross-section*	[mm^2]	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5
3/PE ~ 230V 50/60Hz								
Rated power consumption	[kW]	1,3	1,3	1,3	1,7	1,7	2,5	2,6
Rated current	[A]	4,5	4,5	4,5	5,8	5,8	8,7	9,0
Fuse	[A]	16,0	16,0	16,0	16,0	16,0	16,0	16,0
recommended wire cross-section*	[mm^2]	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5

OGS		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Heat output								
latent	[kJ/h]	2100	3500	3500	7100	11000	7100	11000
sensible	[kJ/h]	2500	4100	4100	7200	8200	8200	14100

*recommended conductor cross-section for wires laid uncovered in air up to 5 m in length.

Gas supply

The following table shows the conditions for the gas supply:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Fuels		Natural gas, liquid gas						
Flue gas connection		Air conditioning system with safety shutdown						
Convection power	[kW]	12	20	20	35	40	40	70

Gas consumption

The following table lists the gas consumption of the gas appliances:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Natural gas (H) G20	[m³/h]	1,3	2,1	2,1	3,7	4,2	4,2	7,4
Natural gas (L) G25	[m³/h]	1,5	2,5	2,5	4,3	4,9	4,9	8,6
Liquid gas G30/G31*	[kg/h]	0,9	1,5	1,5	2,7	3,1	3,1	5,4

* up to 15% higher consumption for butane G30

Summary of gas data

The table below lists the possible gas data (as per CE) at 15°C and 1013 mbar dry:

Family	Gas type and symbol	Supply flow pressure	Wobbe Index		Lower heating value		Higher heating value	
			lower	higher				
			W_U	W_O	H_U	H_U	H_O	H_O
		[mbar]	[MJ/m³]					
2H (E)	Natural gas (H) G20	17 - 25	45,7	50,7	34,0	-	37,8	-
2L (LL)	Natural gas (L) G25	18 - 30	37,4	41,5	29,3	-	32,5	-
3B	Butane G30*	25 - 57,5	80,6	87,3	116,1	45,7	125,8	49,5
3P	Propane G31	25 - 57,5	70,7	76,8	88,0	46,7	95,7	50,4

Flue gas values

Refer to the table below for the permitted flue gas values.

If the CO value is exceeded or the CO_2 values not met,

- the appliance must be re-adjusted by an authorized customer service engineer.
- only operate the appliance during this period for maintenance and installation work.
- ensure there is sufficient ventilation.

The following table shows the required flue gas values:

Type of gas	CO_2	CO
	[%]	[ppm]
Natural gas	8,6 - 9,6	< 500
Propane liquid gas	10,0 - 11,0	< 500
Butane liquid gas	11,7 - 12,7	< 500

Flue gas output rate

The following table shows the flue gas output rate for the gas appliances:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Flue gas output rate	[m³/h]	25	40	40	70	80	80	140

Heat output of gas appliances

The following table shows the heat output for gas appliances:

OGS		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Convection burner	[kW]	12	20	20	35	40	40	70

Water supply and water quality

The following table shows the values for the water supply and water quality:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Water supply (cold only)							
Shut-off valve	with non-return valve and dirt filter						
Water intake	G 3/4", permanent connection optional with min. 3/8" supply pipe						
Flow pressure							
without ConvoClean *system*	2 - 6 bar						
with ConvoClean *system*	3 - 6 bar						
Drinking water quality (install water treatment unit if necessary)							
Overall hardness	5 - 15	°dH	(German degrees of hardness)				
	9 - 13	°fH	(French degrees of hardness)				
	6,3 - 8,8	°eH	(English degrees of hardness)				
	90 - 120	ppm	(USA)				
pH	6,5 - 8,5						
Conductivity	10 - 200 µS/cm						
Cl^-	max. 100 mg/l						
SO_4^-	max. 400 mg/l						
Fe	max. 0.1 mg/l						
Mn	max. 0.05 mg/l						
Cu	max. 0.05 mg/l						
Cl_2	max. 0.1 mg/l						
Water drain							
Type	DN 50, permanent connection or funnel waste trap						

Water hardness

The following table shows the approved minimum and maximum water hardness:

	min.	max.
°dH (German degrees of hardness)	5,0	7,0
°fH (French degrees of hardness)	9,0	13,0
°eH (English degrees of hardness)	6,3	8,8
ppm (USA)	90,0	125,0

Water consumption

The following table shows the water consumption of the combi steamer:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Water consumption								
Total (guide value)	[l/h]	20-30	30-50	30-50	40-70	50-80	60-80	80-100
Max. consumption for appliance without automatic interior oven cleaning	[l/min]	6	6	6	6	6	6	6
Max. consumption for appliance with automatic interior oven cleaning	[l/min]	11	11	11	11	11	11	11

Hydrogen ion exchanger

The following table shows the flow rate required for the hydrogen ion exchanger:

		Table-top appliances			Floor-standing appliances			
		6.10	6.20	10.10	10.20	12.20	20.10	20.20
OEB/OGB	**[l/min]**	0,2	0,4	0,4	0,6	0,7	0,7	1,0
OES/OGS	**[l/min]**	0,15	0,2	0,2	0,2	0,3	0,5	0,5

The water consumption may increase significantly if the moisture removal option is used frequently.

Appliance technical standards

The following table shows the technical standards for the appliance:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Degree of protection	IPX5						
Approval mark	TÜV, Gastec QA, DIN GOST TÜV, SVGW, WRAS, UL, NSF, JIA, AGA Approval marks are only present on the device based on country-specific regulations.						
Noise emission							
measured	< 70 dBA						

Technical data for OGB

Dimensions and weights

The following table shows appliance dimensions and weights:

OGB		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Width						including loading trolley		
with packaging	[mm]	1130	1410	1130	1410	1435	1150	1435
without packaging	[mm]	932	1217	932	1217	1232	947	1232
Depth [mm]						including loading trolley		
with packaging	[mm]	950	1175	950	1175	1200	1000	1200
without packaging	[mm]	805	1027	805	1027	1055	855	1055
Height [mm]						including loading trolley		
with packaging	[mm]	1040	1105	1310	1330	1650	2185	2185
without packaging	[mm]	852	895	1120	1120	1416	1952	1952
Weight						including loading trolley		
with packaging	[kg]	210	276	246	340	400	408	520
without packaging	[kg]	175	235	200	280	342	344	458
Weight with ConvoClean *system*						including loading trolley		
with packaging	[kg]	230	296	266	332	420	428	540
without packaging	[kg]	183	243	208	288	350	352	466
Safety clearances [mm]								
Rear	[mm]	50						
Right-hand side	[mm]	50						
Left-hand side	[mm]	100						
Above	[mm]	500 (for ventilation)						

Electrical installed load ratings

The following table shows the electrical installed load ratings:

OGB		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
3/N/PE ~ 400V 50/60Hz								
Rated power consumption	[kW]	1,2	1,2	1,2	1,5	1,5	2,2	2,2
Convection power	[kW]	12,0	20,0	20,0	35,0	40,0	40,0	70,0
Steam power	[kW]	12,0	18,0	18,0	30,0	35,0	30,0	35,0
Rated current	[A]	2,9	2,9	2,9	3,6	3,6	5,1	5,4
Fuse	[A]	16,0	16,0	16,0	16,0	16,0	16,0	16,0
recommended wire cross-section*	[mm^2]	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5
3/PE ~ 230V 50/60Hz								
Rated power consumption	[kW]	1,4	1,4	1,4	1,8	1,8	2,6	2,7
Convection power	[kW]	12,0	20,0	20,0	35,0	40,0	40,0	70,0
Steam power	[kW]	12,0	18,0	18,0	30,0	35,0	30,0	35,0

OGB		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Rated current	[A]	4,9	4,9	4,9	6,2	6,2	9,1	9,4
Fuse	[A]	16,0	16,0	16,0	16,0	16,0	16,0	16,0
recommended wire cross-section*	[mm^2]	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5	5x 1.5
Heat output								
latent	[kJ/h]	2100	3500	3500	7100	11000	7100	11000
sensible	[kJ/h]	2500	4100	4100	7200	8200	8200	14100

*recommended conductor cross-section for wires laid uncovered in air up to 5 m in length..

Gas supply

The following table shows the conditions for the gas supply:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
		Table-top appliances				Floor-standing appliances		
Fuels		Natural gas, liquid gas						
Flue gas connection		Air conditioning system with safety shutdown						
Convection power	[kW]	12	20	20	35	40	40	70

Gas consumption

The following table lists the gas consumption of the gas appliances:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Natural gas (H) G20	[m^3/h]	1,3	2,1	2,1	3,7	4,2	4,2	7,4
Natural gas (L) G25	[m^3/h]	1,5	2,5	2,5	4,3	4,9	4,9	8,6
Liquid gas G30/G31*	[kg/h]	0,9	1,5	1,5	2,7	3,1	3,1	5,4

* up to 15% higher consumption for butane G30

Summary of gas data

The table below lists the possible gas data (as per CE) at 15°C and 1013 mbar dry:

Family	Gas type and symbol	Supply flow pressure	Wobbe Index		Lower heating value		Higher heating value	
			lower	higher				
			W_U	W_O	H_U	H_U	H_O	H_O
		[mbar]	[MJ/m^3]					
2H (E)	Natural gas (H) G20	17 - 25	45,7	50,7	34,0	-	37,8	-
2L (LL)	Natural gas (L) G25	18 - 30	37,4	41,5	29,3	-	32,5	-
3B	Butane G30*	25 - 57,5	80,6	87,3	116,1	45,7	125,8	49,5
3P	Propane G31	25 - 57,5	70,7	76,8	88,0	46,7	95,7	50,4

Flue gas values

Refer to the table below for the permitted flue gas values.

If the CO value is exceeded or the CO_2 values not met,

- the appliance must be re-adjusted by an authorized customer service engineer.
- only operate the appliance during this period for maintenance and installation work.
- ensure there is sufficient ventilation.

The following table shows the required flue gas values:

Type of gas	CO_2	CO
	[%]	[ppm]
Natural gas	8,6 - 9,6	< 500
Propane liquid gas	10,0 - 11,0	< 500
Butane liquid gas	11,7 - 12,7	< 500

Flue gas output rate

The following table shows the flue gas output rate for the gas appliances:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Flue gas output rate	[m³/h]	25	40	40	70	80	80	140

Heat output of gas appliances

The following table shows the heat output for gas appliances:

OGB		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Convection burner	[kW]	12	20	20	35	40	40	70
Steam generator burner	[kW]	12	18	18	30	35	30	35

Water supply and water quality

The following table shows the values for the water supply and water quality:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Water supply (cold only)							
Shut-off valve	with non-return valve and dirt filter						
Water intake	G 3/4", permanent connection optional with min. 3/8" supply pipe						
Flow pressure							
without ConvoClean *system*	2 - 6 bar						
with ConvoClean *system*	3 - 6 bar						
Drinking water quality (install water treatment unit if necessary)							
Overall hardness	5 - 15	°dH	(German degrees of hardness)				
	9 - 13	°fH	(French degrees of hardness)				
	6,3 - 8,8	°eH	(English degrees of hardness)				
	90 - 120	ppm	(USA)				
pH	6,5 - 8,5						

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				Floor-standing appliances		
Conductivity	10 - 200 µS/cm						
Cl^-	max. 100 mg/l						
SO_4^-	max. 400 mg/l						
Fe	max. 0.1 mg/l						
Mn	max. 0.05 mg/l						
Cu	max. 0.05 mg/l						
Cl_2	max. 0.1 mg/l						
Water drain							
Type	DN 50, permanent connection or funnel waste trap						

Water hardness

The following table shows the approved minimum and maximum water hardness:

	min.	max.
°dH (German degrees of hardness)	5,0	18,0
°fH (French degrees of hardness)	9,0	33,0
°eH (English degrees of hardness)	6,3	23,0
ppm (USA)	90,0	320,0

Water consumption

The following table shows the water consumption of the combi steamer:

		6.10	6.20	10.10	10.20	12.20	20.10	20.20
Water consumption								
Total (guide value)	[l/h]	20-30	30-50	30-50	40-70	50-80	60-80	80-100
Max. consumption for appliance without automatic interior oven cleaning	[l/min]	6	6	6	6	6	6	6
Max. consumption for appliance with automatic interior oven cleaning	[l/min]	11	11	11	11	11	11	11

Hydrogen ion exchanger

The following table shows the flow rate required for the hydrogen ion exchanger:

		Table-top appliances			Floor-standing appliances			
		6.10	6.20	10.10	10.20	12.20	20.10	20.20
OEB/OGB	**[l/min]**	0,2	0,4	0,4	0,6	0,7	0,7	1,0
OES/OGS	**[l/min]**	0,15	0,2	0,2	0,2	0,3	0,5	0,5

The water consumption may increase significantly if the moisture removal option is used frequently.

Appliance technical standards

The following table shows the technical standards for the appliance:

	6.10	6.20	10.10	10.20	12.20	20.10	20.20
	Table-top appliances				**Floor-standing appliances**		
Degree of protection	IPX5						
Approval mark	TÜV, Gastec QA, DIN GOST TÜV, SVGW, WRAS, UL, NSF, JIA, AGA Approval marks are only present on the device based on country-specific regulations.						
Noise emission							
measured	< 70 dBA						

Technical data for accessories

Dimensions

The following table lists the dimensions of accessories for the combi steamer:

Model	**OES / OGS / OEB / OGB**						
Appliance size	**6.10**	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
	W x D x H	**W x D x H**	**W x D x H**	**W x D x H**	**W x D x H**	**W x D x H**	**W x D x H**
	[mm]	**[mm]**	**[mm]**	**[mm]**	**[mm]**	**[mm]**	**[mm]**
Open oven stand without wheels	807 x 700 x 620	1217 x 792 x 620	807 x 700 x 620	1217 x 792 x 620			
Open oven stand with wheels	908 x 700 x 620	1318 x 792 x 620	908 x 700 x 620	1318 x 792 x 620			
Enclosed oven stand without wheels	810 x 726 x 621	1220 x 818 x 621	810 x 726 x 621	1220 x 818 x 621			
Enclosed oven stand with wheels	908 x 726 x 621	1318 x 818 x 621	908 x 726 x 621	1318 x 818 x 621			
Loading trolley					740 x 910 x 1317	535 x 753 x 1853	740 x 910 x 1853
Plate banquet trolley					740 x 977 x 1320	511 x 781 x 1848	740 x 977 x 1320
Extractor hood	905 x 1160 x 414	1190 x 1385 x 414	905 x 1160 x 414	1190 x 1385 x 414			

8.2 Dimensions, dimensional drawings and connection diagrams

Purpose of this chapter

This chapter contains the dimensions, dimensional drawings and connection diagrams for your combi steamer.

Contents

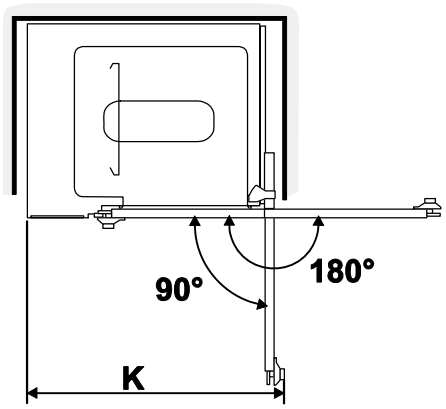
This chapter includes the following topics:

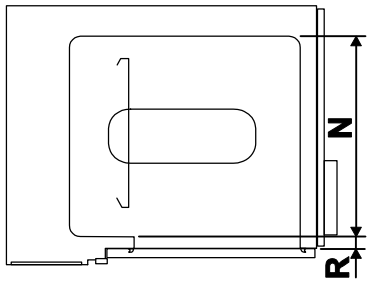
	Page
Dimensions, summary	91
OES/OEB 6.10	92
OES/OEB 6.20	93
OES/OEB 10.10	94
OES/OEB 10.20	95
OES/OEB 12.20	96
OES/OEB 20.10	97
OES/OEB 20.20	98
OGS 6.10	99
OGS 6.20	100
OGS 10.10	101
OGS 10.20	102
OGS 12.20	103
OGS 20.10	104
OGS 20.20	105
OGB 6.10	106
OGB 6.20	107
OGB 10.10	108
OGB 10.20	109
OGB 12.20	110
OGB 20.10	111
OGB 20.20	112

Dimensions, summary

Appliance dimensions

The following diagrams and tables summarize the appliance dimensions:





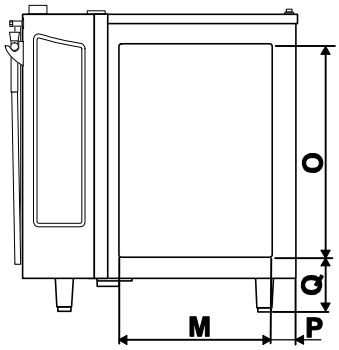


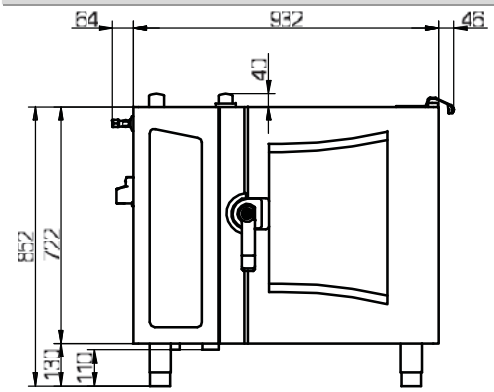
		Table-top appliances				Floor-standing appliances		
		6.10	**6.20**	**10.10**	**10.20**	**12.20**	**20.10**	**20.20**
K = width with door open 90°	[mm]	1061	1302	1016	1302	1345	1016	1345
M = interior width of oven	[mm]	445	650	445	650	650	445	650
N = interior depth of oven	[mm]	640	640	640	840	840	640	840
O = interior height of oven	[mm]	492	535	760	760	956	1492	1492
P = width of hinge side	[mm]	45	45	45	45	60	60	60
Q = ledge height	[mm]	280	280	280	280	380	380	380
R = oven mouth depth	[mm]	33	33	33	33	33	33	33
Hand shower hose length	[mm]	1115	1115	1430	1430	1115	1640	1640

Material

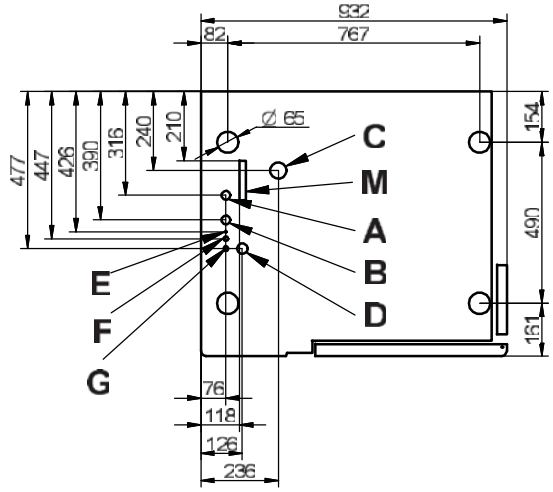
The interior and exterior structure of the combi steamer is made of stainless steel.

OES/OEB 6.10

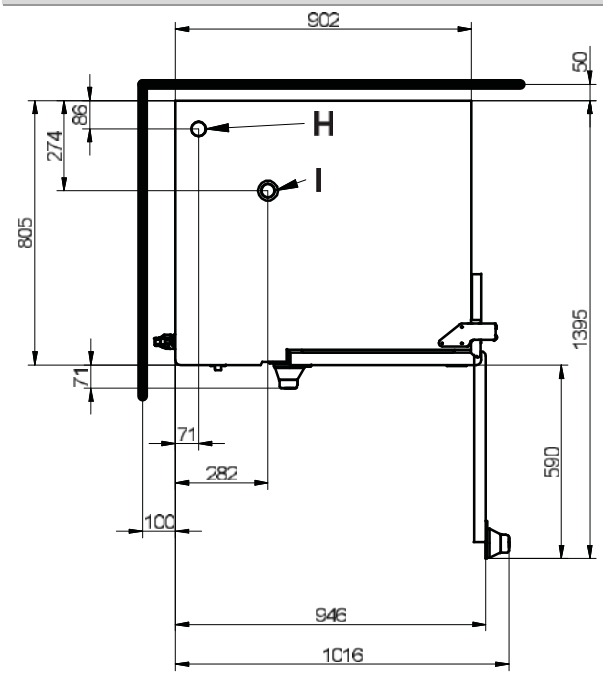
View



Connections on the underside



View from above with wall clearances

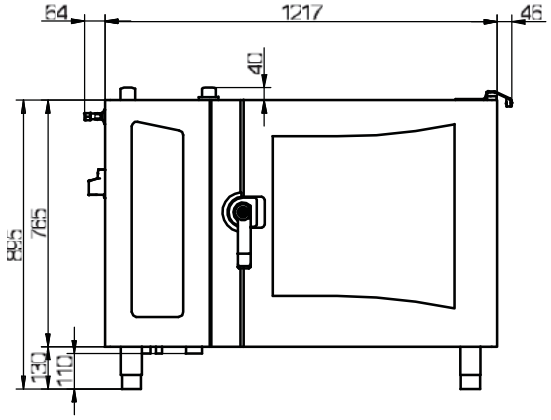


Meaning of labeled elements

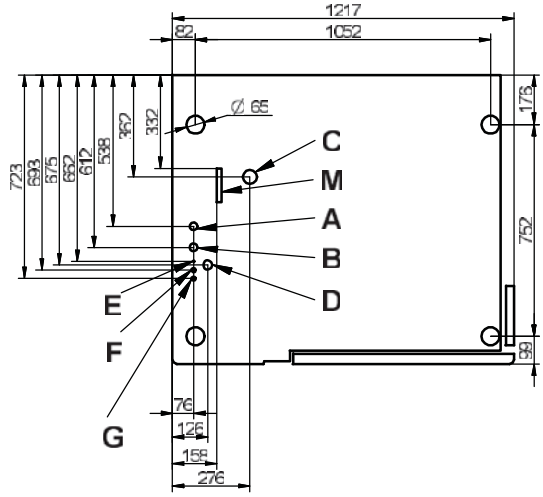
A	Soft water connection G3/4"
B	Cold water connection G3/4"
C	Drain connection DN50
D	Electrical supply
E	Potential equalization
F	Rinse agent connection
G	Cleaning agent connection
H	Ventilation pipe
I	Low-pressure failsafe device
M	Overflow 120 x 25

OES/OEB 6.20

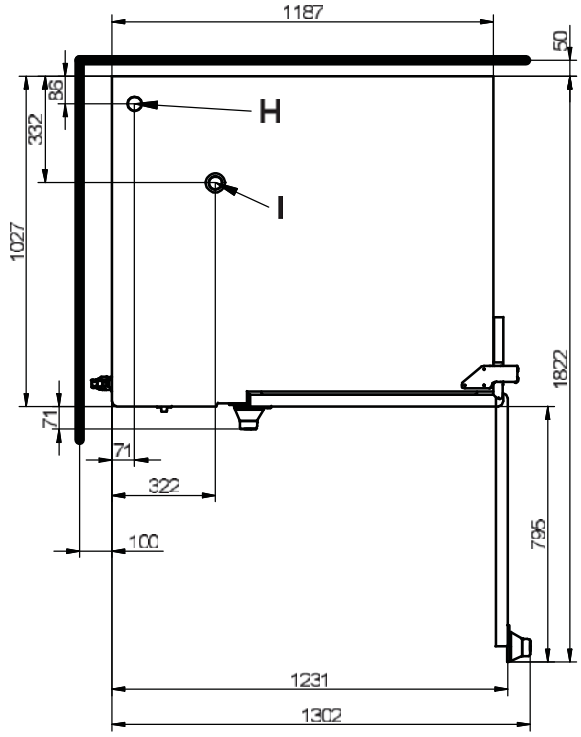
View



Connections on the underside



View from above with wall clearances

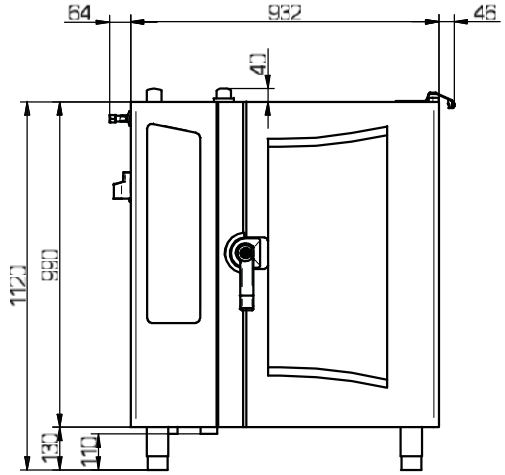


Meaning of labeled elements

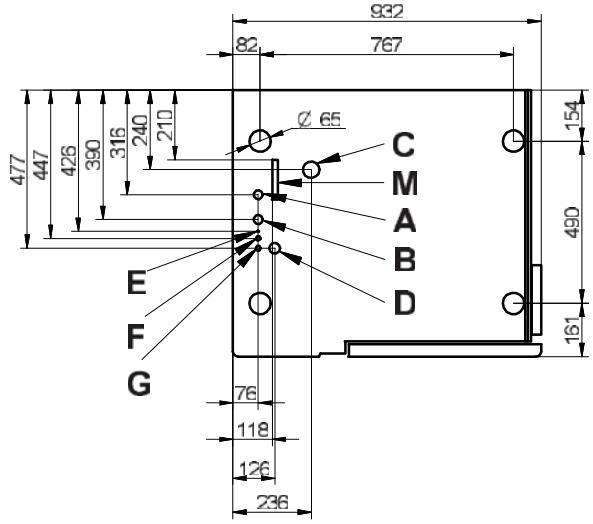
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **M** Overflow 120 x 25

OES/OEB 10.10

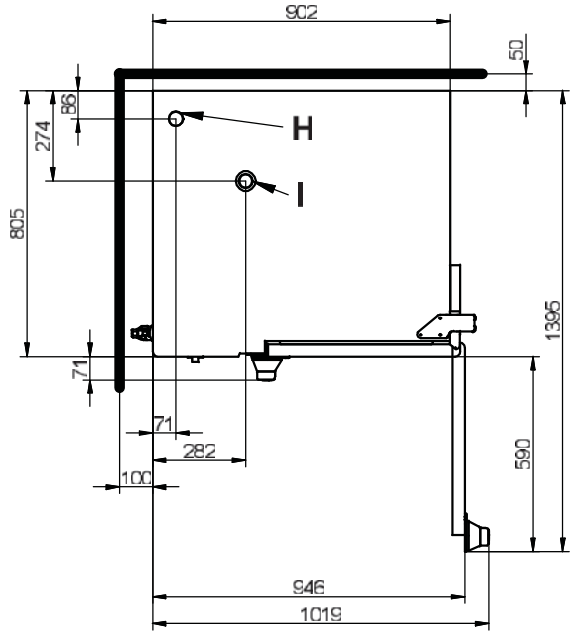
View



Connections on the underside



View from above with wall clearances

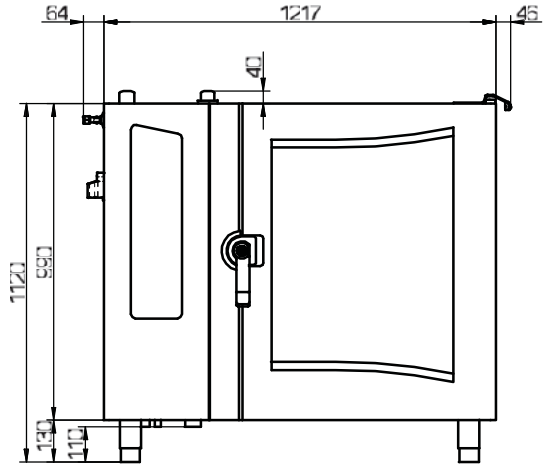


Meaning of labeled elements

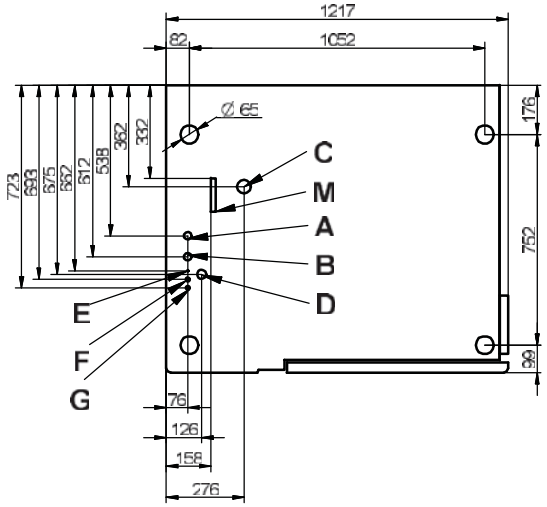
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **M** Overflow 120 x 25

OES/OEB 10.20

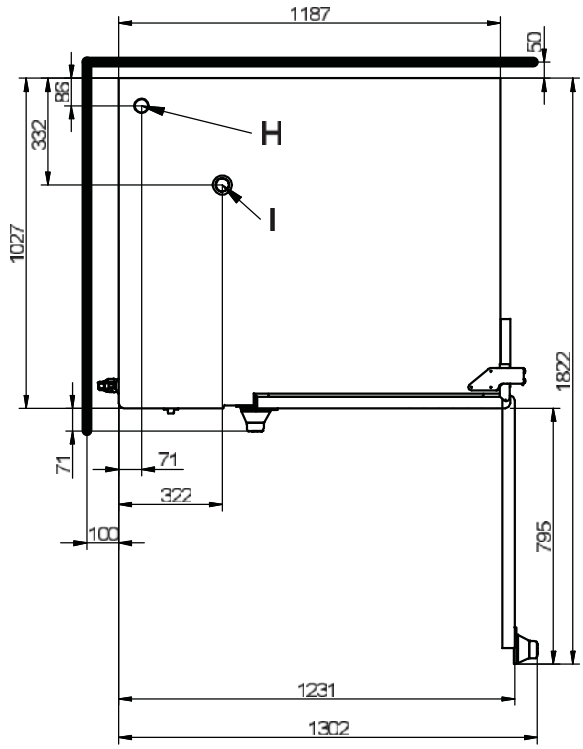
View



Connections on the underside



View from above with wall clearances

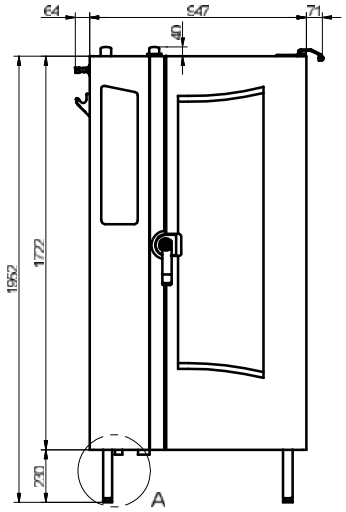


Meaning of labeled elements

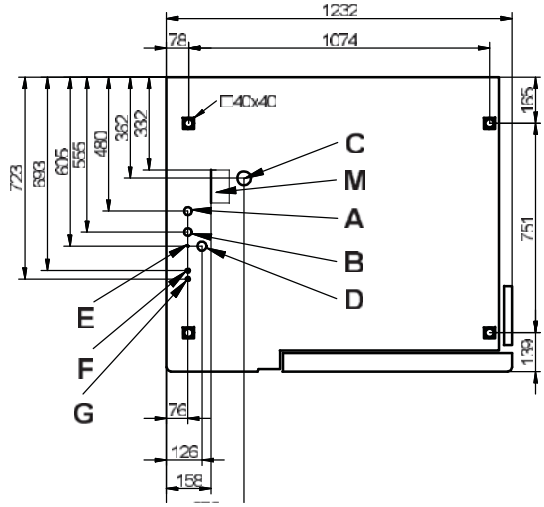
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **M** Overflow 120 x 25

OES/OEB 12.20

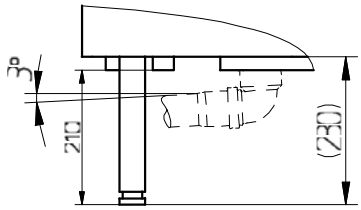
View



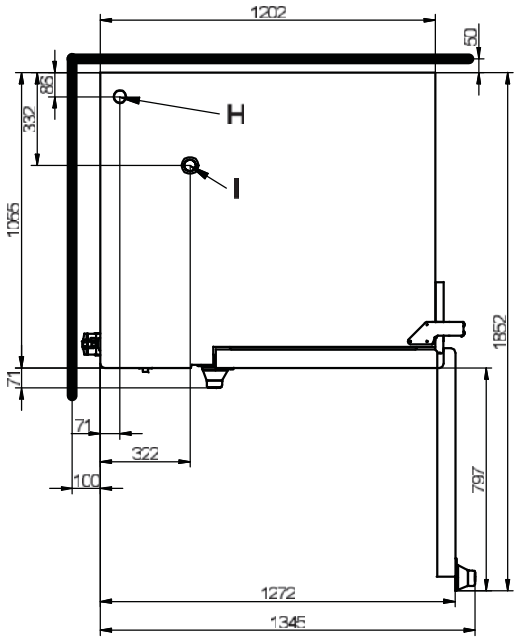
Connections on the underside



Detail A: Water drain



View from above with wall clearances

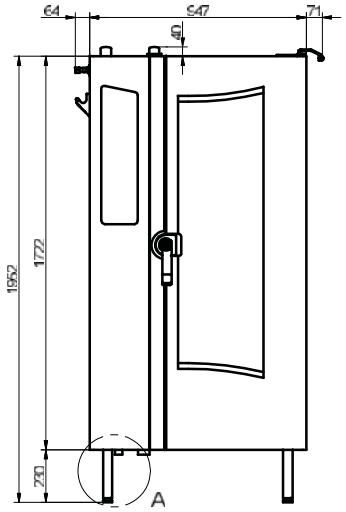


Meaning of labeled elements

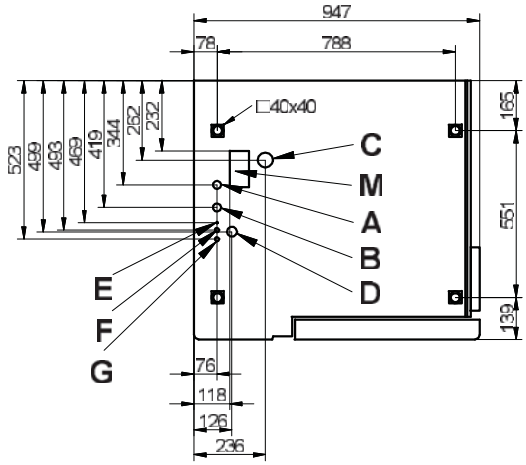
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **M** Overflow 120 x 65

OES/OEB 20.10

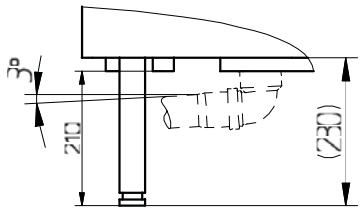
View



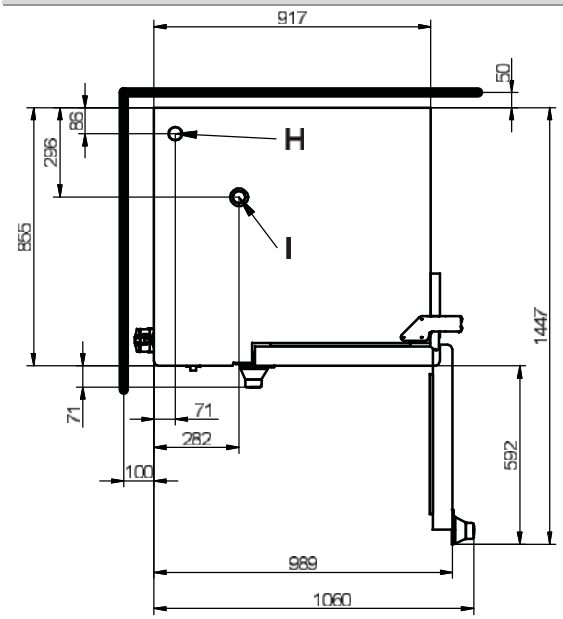
Connections on the underside



Detail A: Water drain



View from above with wall clearances

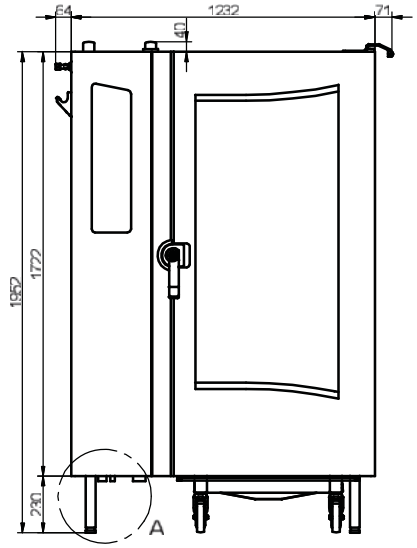


Meaning of labeled elements

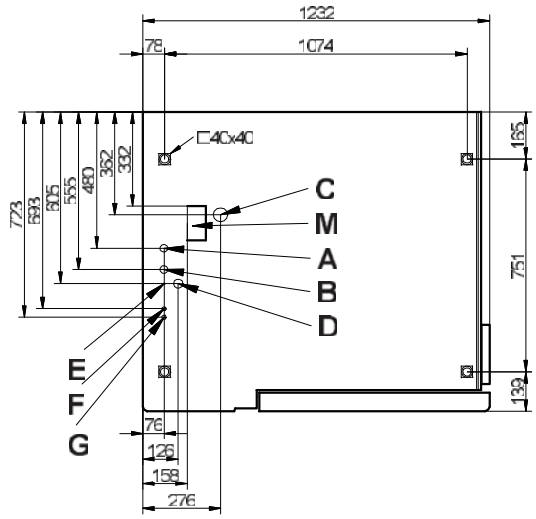
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **M** Overflow 120 x 65

OES/OEB 20.20

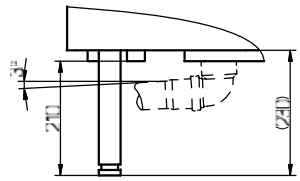
View



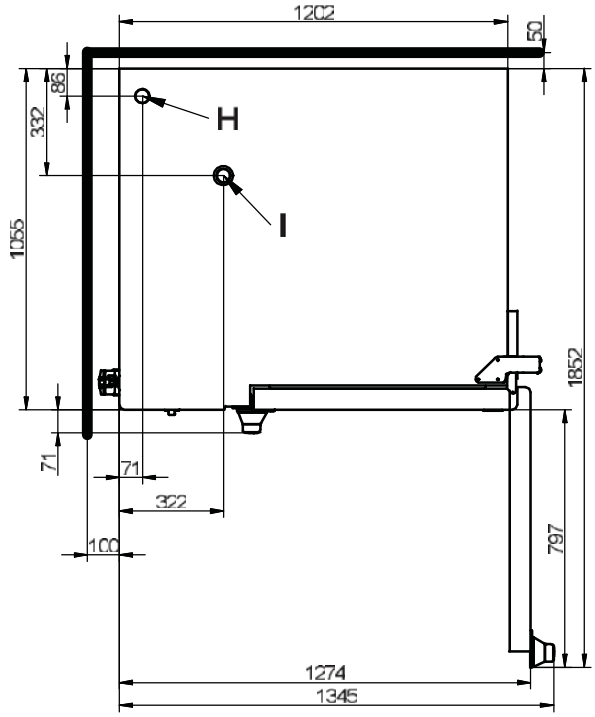
Connections on the underside



Detail A: Water drain



View from above with wall clearances

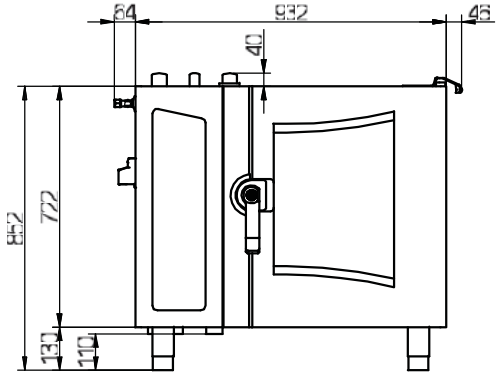


Meaning of labeled elements

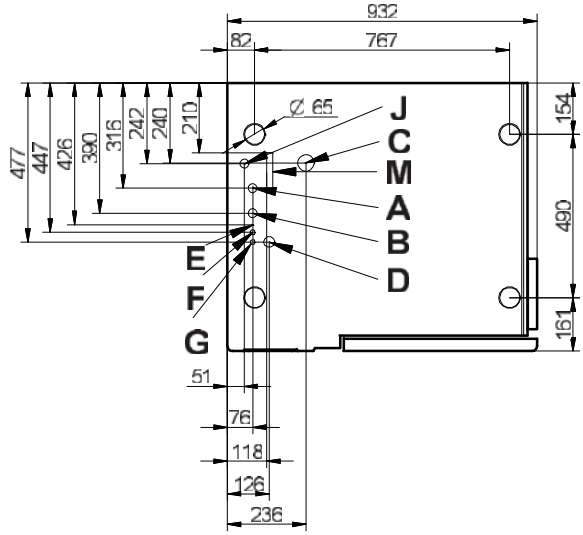
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **M** Overflow 120 x 65

OGS 6.10

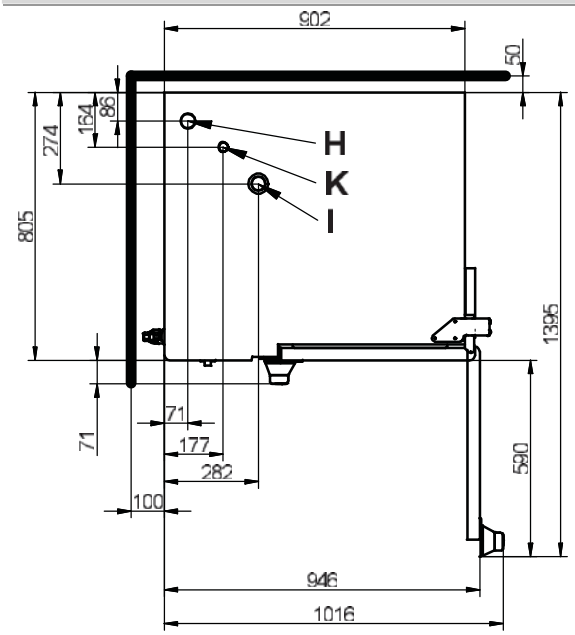
View



Connections on the underside



View from above with wall clearances

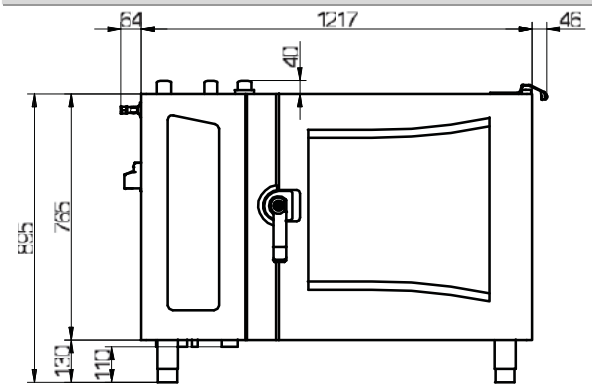


Meaning of labeled elements

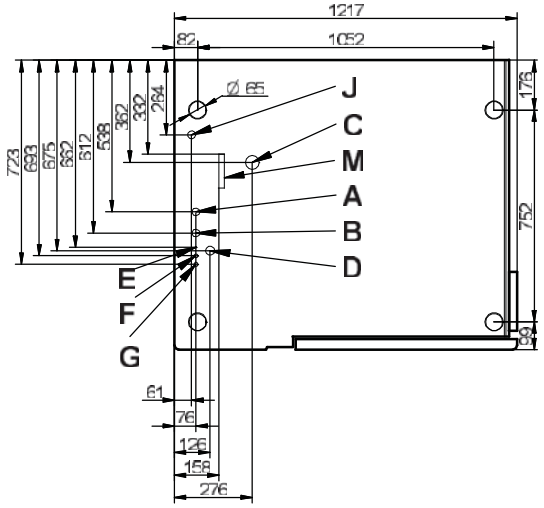
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **M** Overflow 120 x 25

OGS 6.20

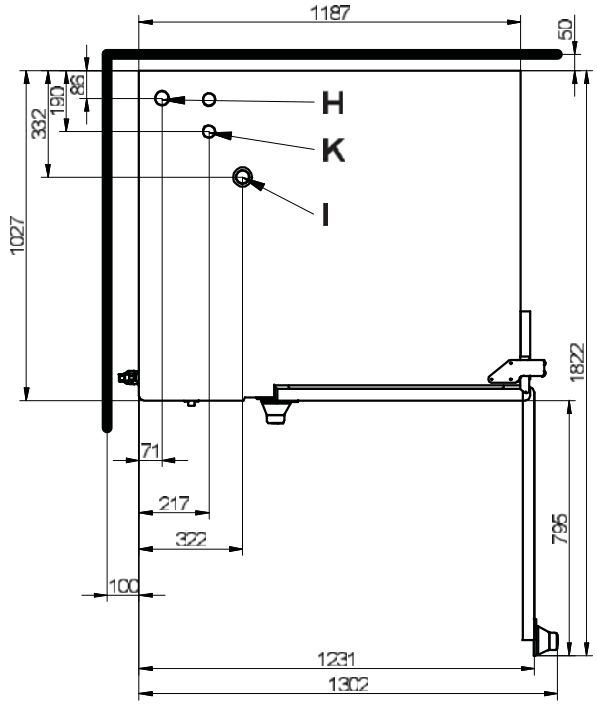
View



Connections on the underside



View from above with wall clearances

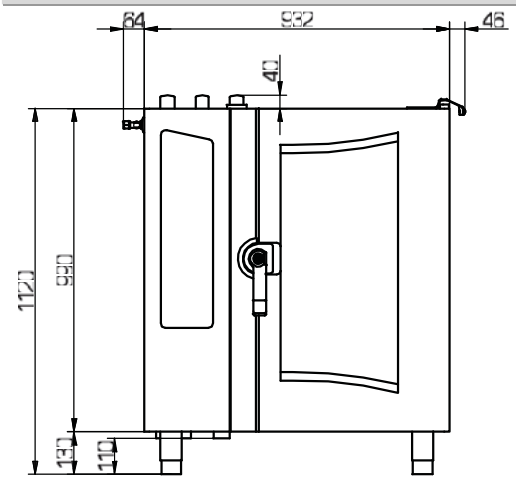


Meaning of labeled elements

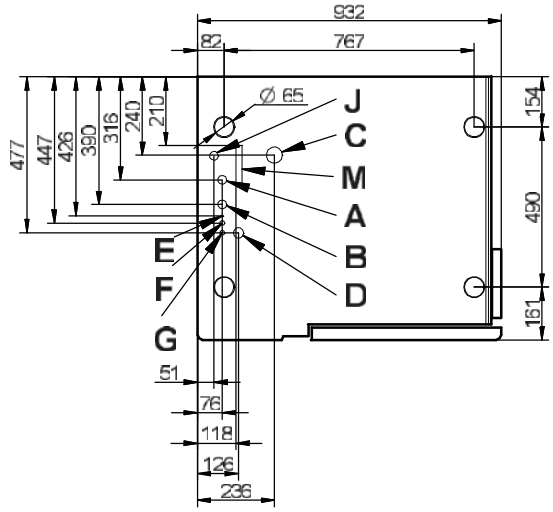
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **M** Overflow 120 x 25

OGS 10.10

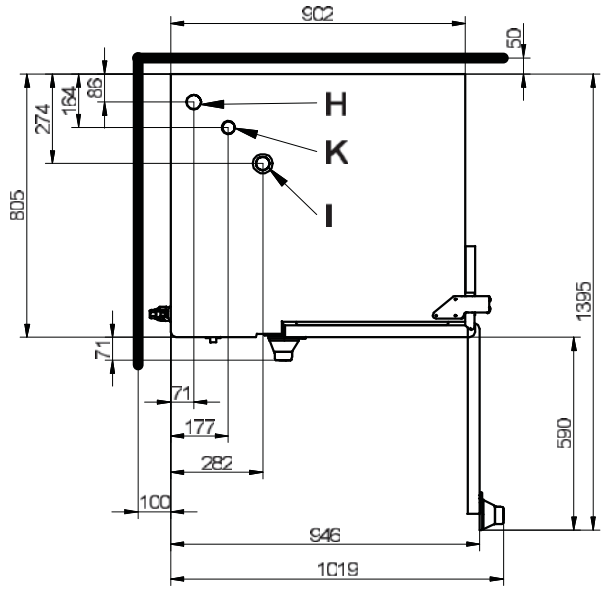
View



Connections on the underside



View from above with wall clearances

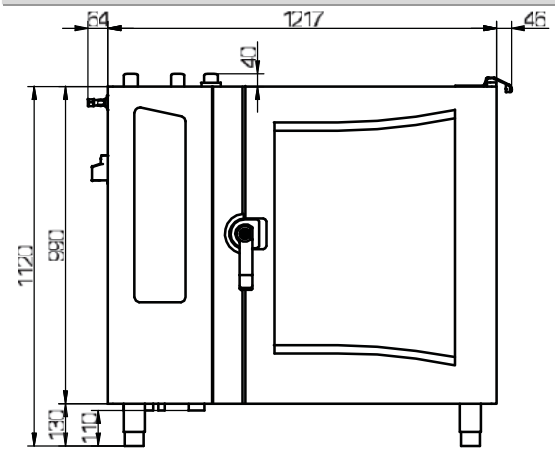


Meaning of labeled elements

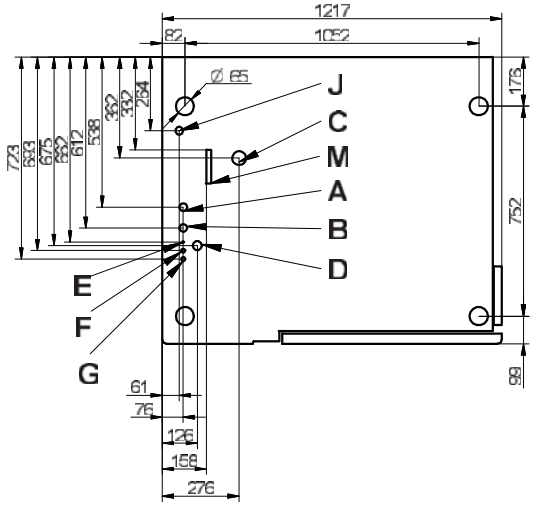
A	Soft water connection G3/4"
B	Cold water connection G3/4"
C	Drain connection DN50
D	Electrical supply
E	Potential equalization
F	Rinse agent connection
G	Cleaning agent connection
H	Ventilation pipe
I	Low-pressure failsafe device
J	Gas supply
K	Flue gas pipe, gas (convection heater)
M	Overflow 120 x 25

OGS 10.20

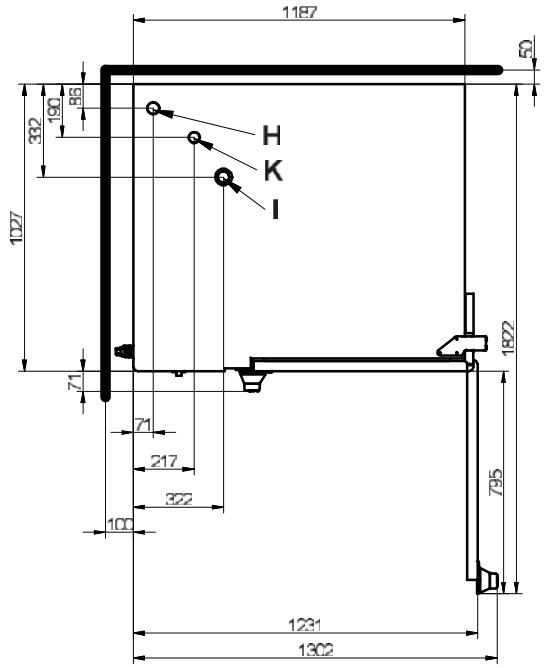
View



Connections on the underside



View from above with wall clearances

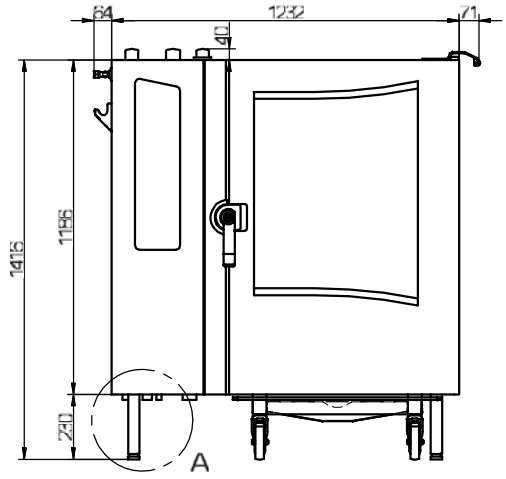


Meaning of labeled elements

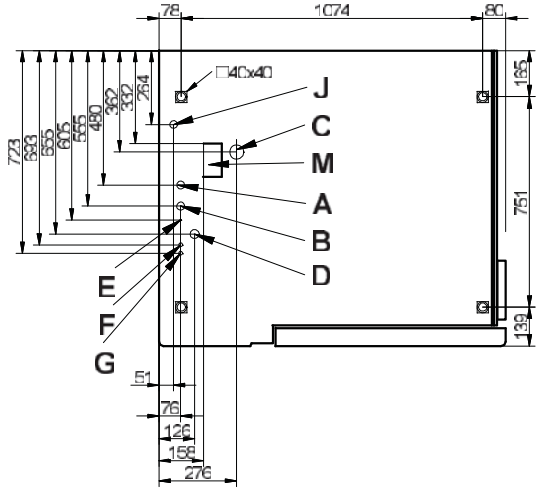
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **M** Overflow 120 x 25

OGS 12.20

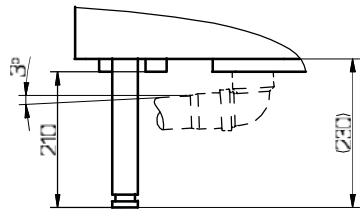
View



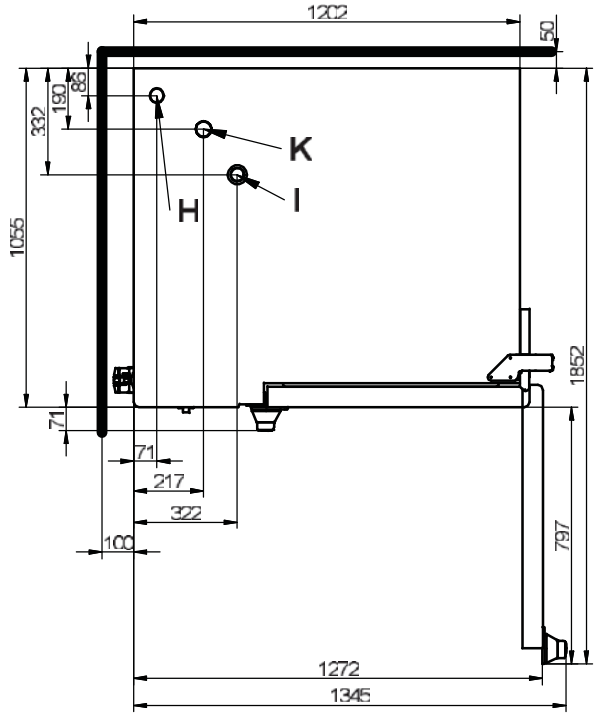
Connections on the underside



Detail A: Water drain



View from above with wall clearances

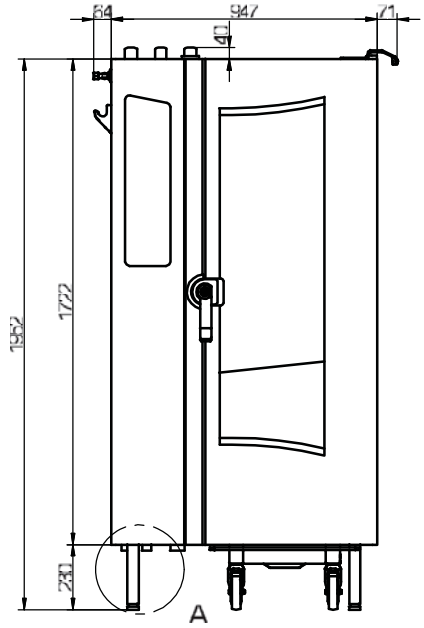


Meaning of labeled elements

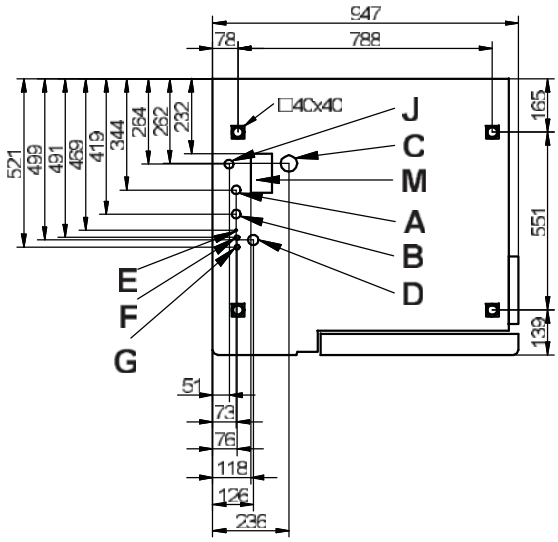
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **M** Overflow 120 x 65

OGS 20.10

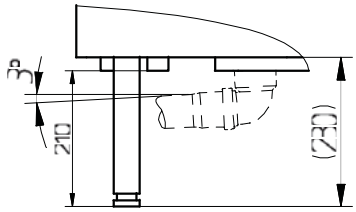
View



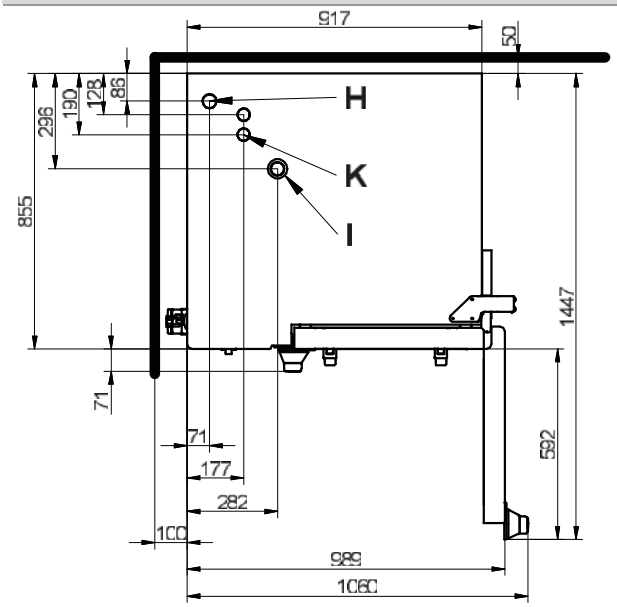
Connections on the underside



Detail A: Water drain



View from above with wall clearances

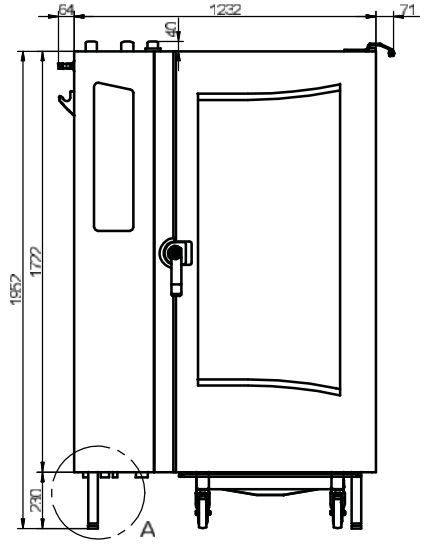


Meaning of labeled elements

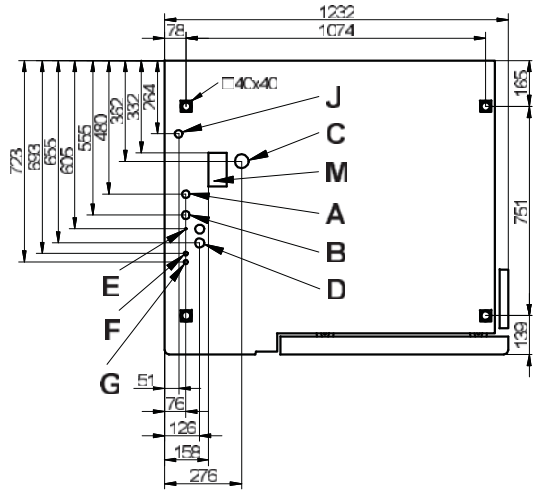
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **M** Overflow 120 x 65

OGS 20.20

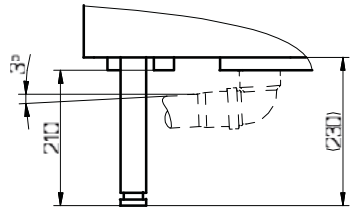
View



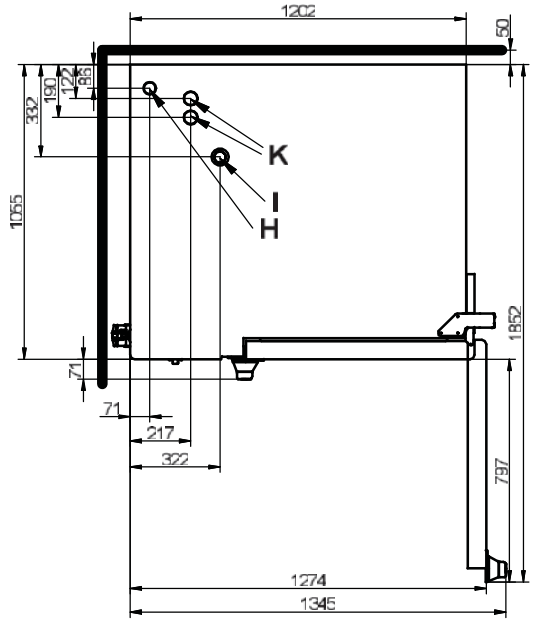
Connections on the underside



Detail A: Water drain



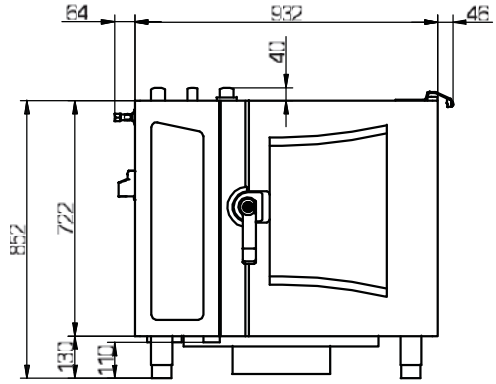
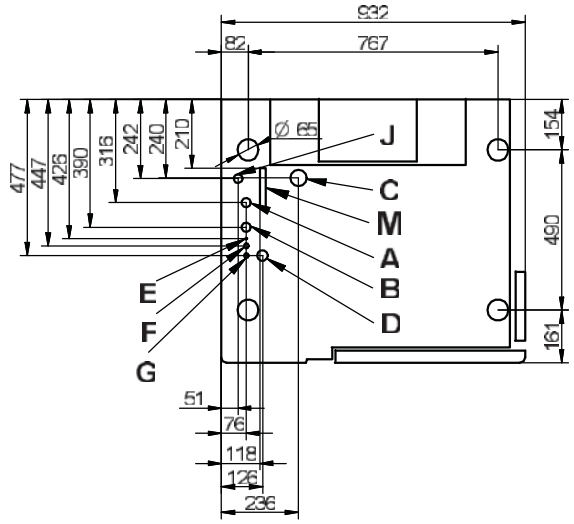
View from above with wall clearances

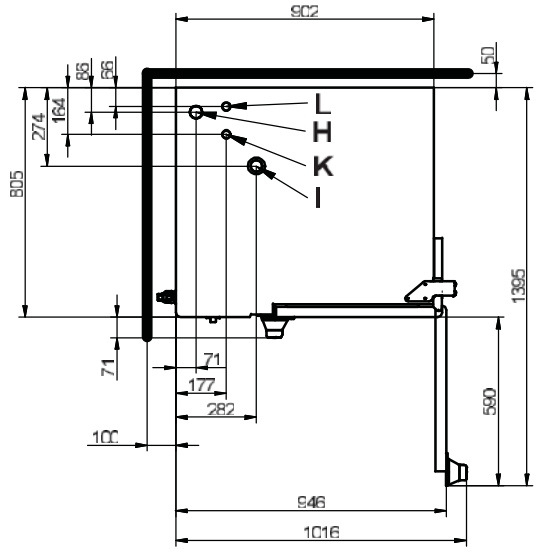


Meaning of labeled elements

- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **M** Overflow 120 x 65

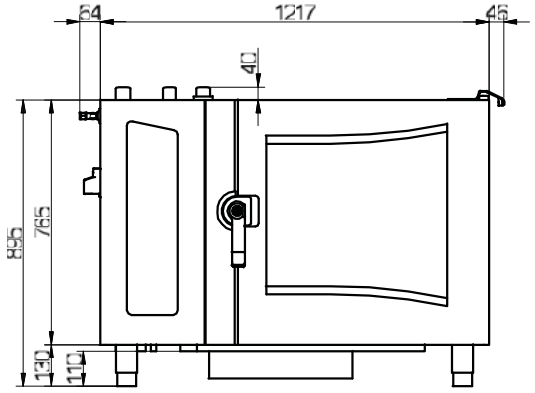
OGB 6.10

View	Connections on the underside
	

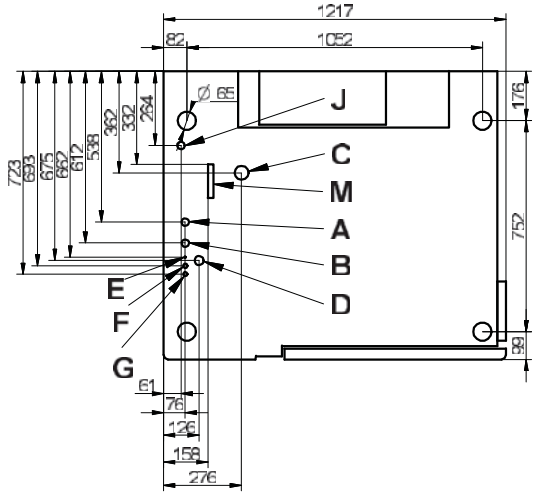
View from above with wall clearances	Meaning of labeled elements
	**A** Soft water connection G3/4" **B** Cold water connection G3/4" **C** Drain connection DN50 **D** Electrical supply **E** Potential equalization **F** Rinse agent connection **G** Cleaning agent connection **H** Ventilation pipe **I** Low-pressure failsafe device **J** Gas supply **K** Flue gas pipe, gas (convection heater) **L** Flue gas pipe, gas (steam generator) **M** Overflow 120 x 25

OGB 6.20

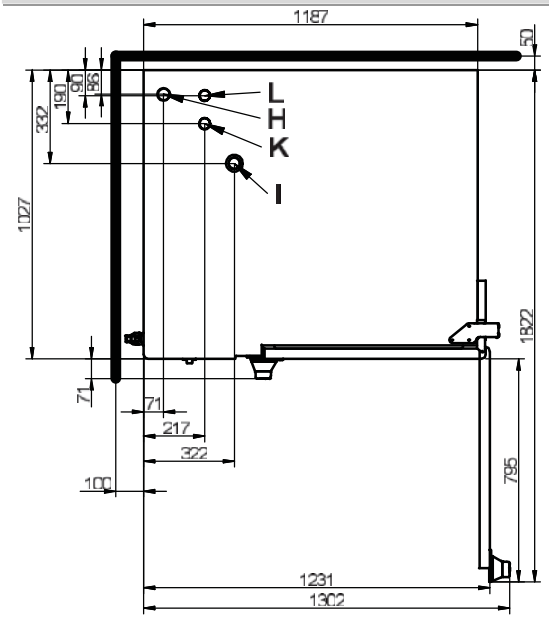
View



Connections on the underside



View from above with wall clearances

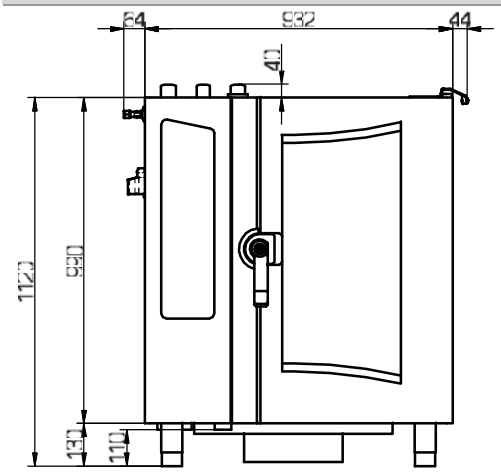


Meaning of labeled elements

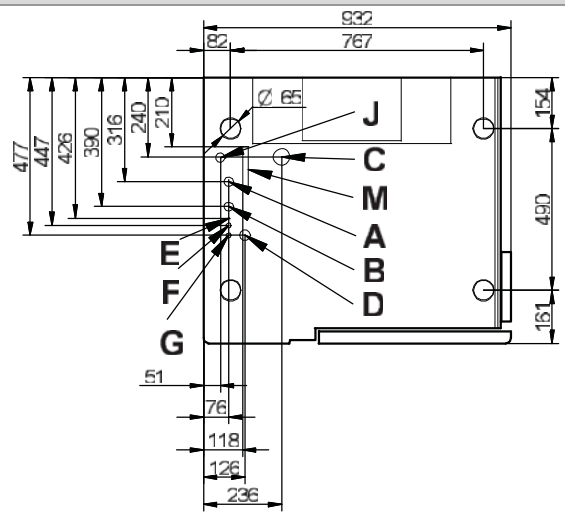
A	Soft water connection G3/4"
B	Cold water connection G3/4"
C	Drain connection DN50
D	Electrical supply
E	Potential equalization
F	Rinse agent connection
G	Cleaning agent connection
H	Ventilation pipe
I	Low-pressure failsafe device
J	Gas supply
K	Flue gas pipe, gas (convection heater)
L	Flue gas pipe, gas (steam generator)
M	Overflow 120 x 25

OGB 10.10

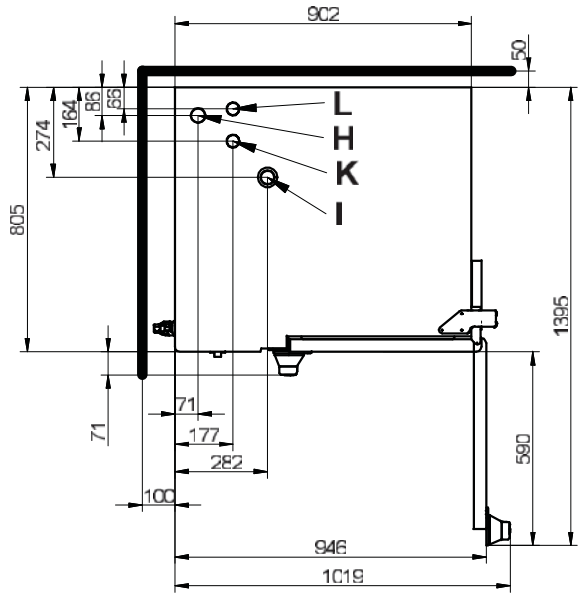
View



Connections on the underside



View from above with wall clearances

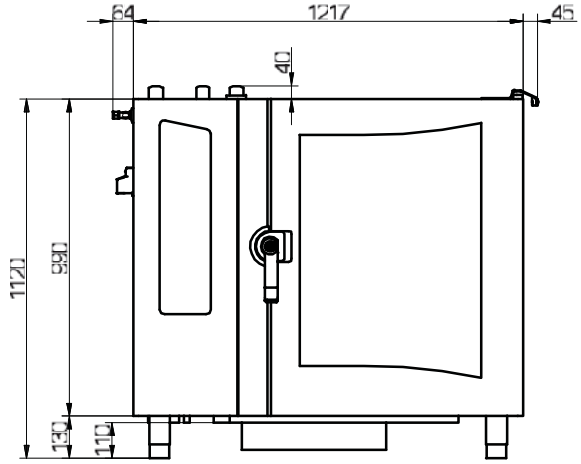


Meaning of labeled elements

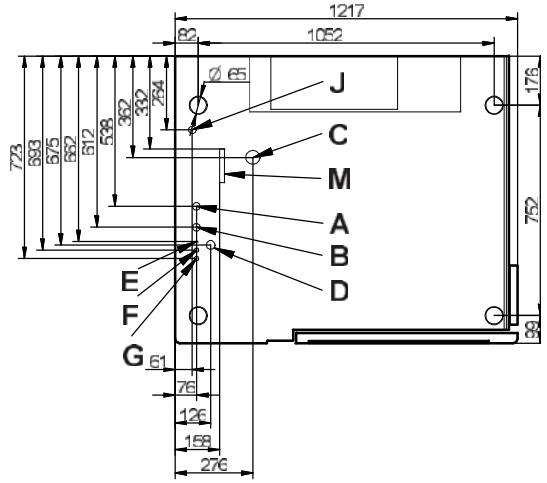
A	Soft water connection G3/4"
B	Cold water connection G3/4"
C	Drain connection DN50
D	Electrical supply
E	Potential equalization
F	Rinse agent connection
G	Cleaning agent connection
H	Ventilation pipe
I	Low-pressure failsafe device
J	Gas supply
K	Flue gas pipe, gas (convection heater)
L	Flue gas pipe, gas (steam generator)
M	Overflow 120 x 25

OGB 10.20

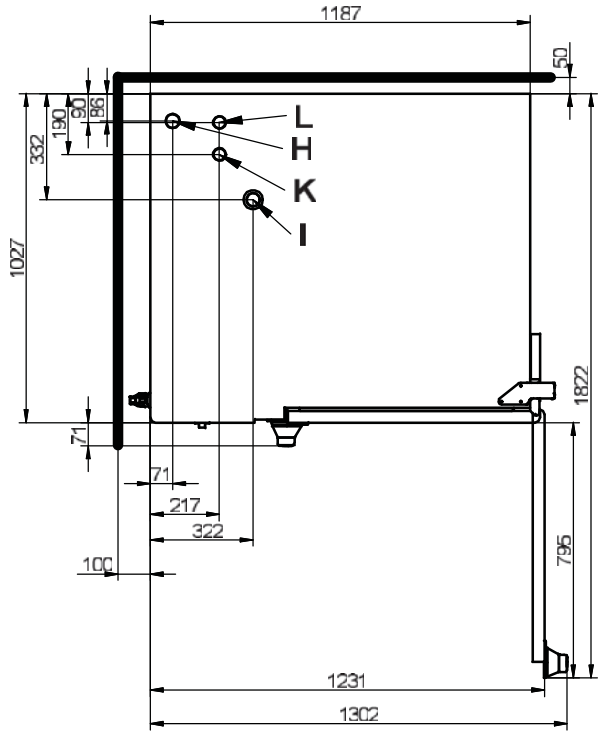
View



Connections on the underside



View from above with wall clearances

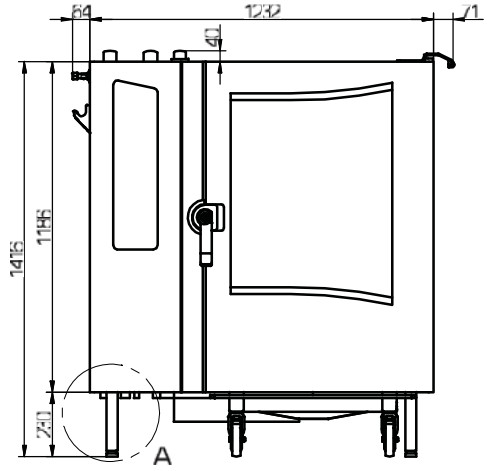


Meaning of labeled elements

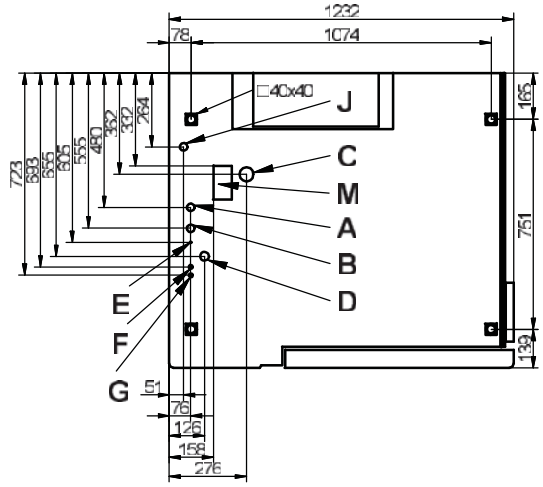
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **L** Flue gas pipe, gas (steam generator)
- **M** Overflow 120 x 25

OGB 12.20

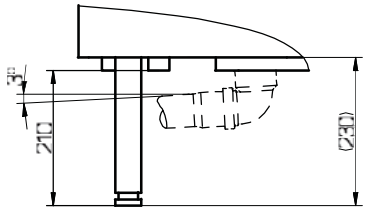
View



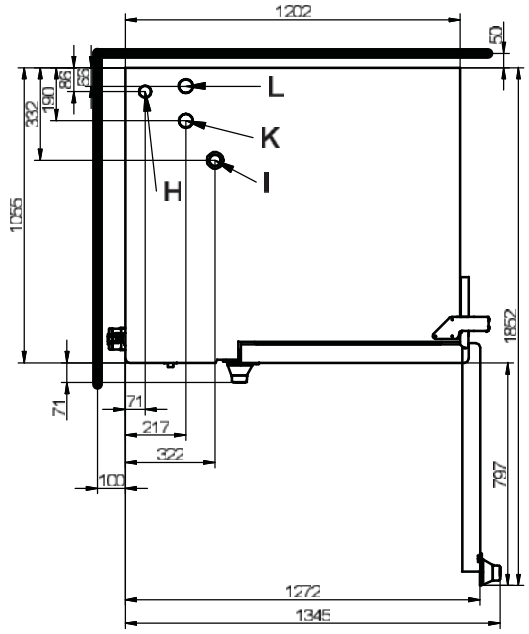
Connections on the underside



Detail A: Water drain



View from above with wall clearances

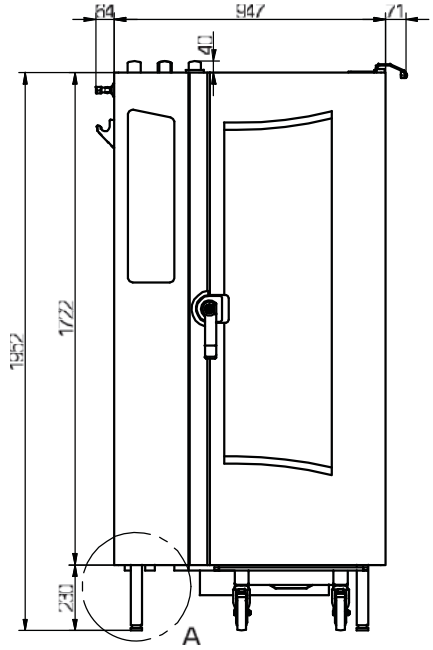


Meaning of labeled elements

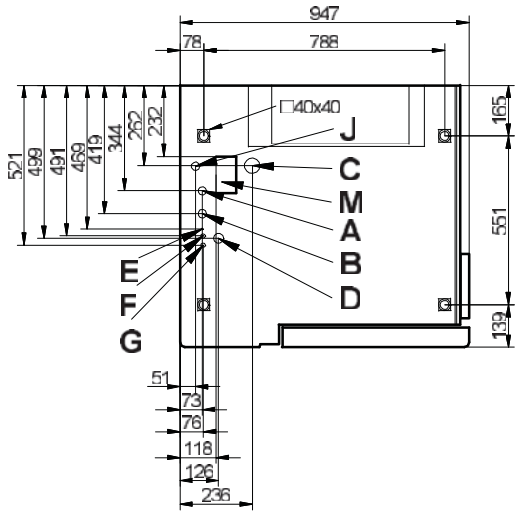
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **L** Flue gas pipe, gas (steam generator)
- **M** Overflow 120 x 65

OGB 20.10

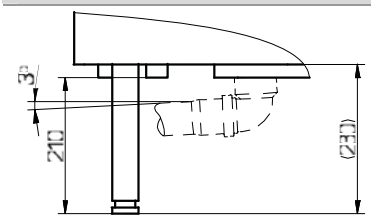
View



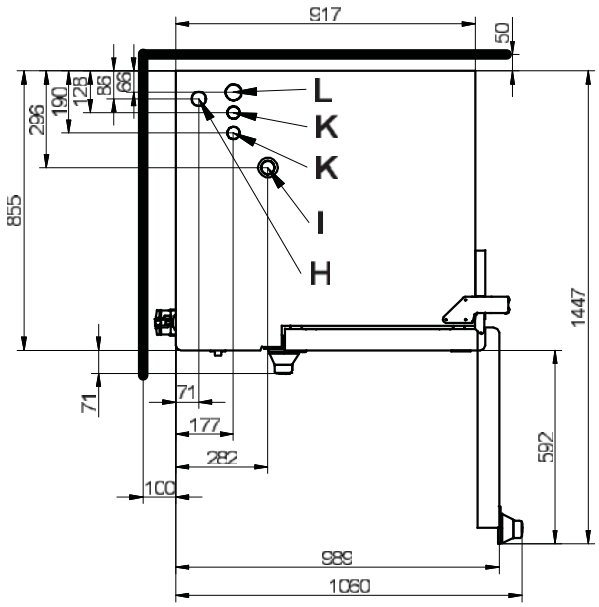
Connections on the underside



Detail A: Water drain



View from above with wall clearances

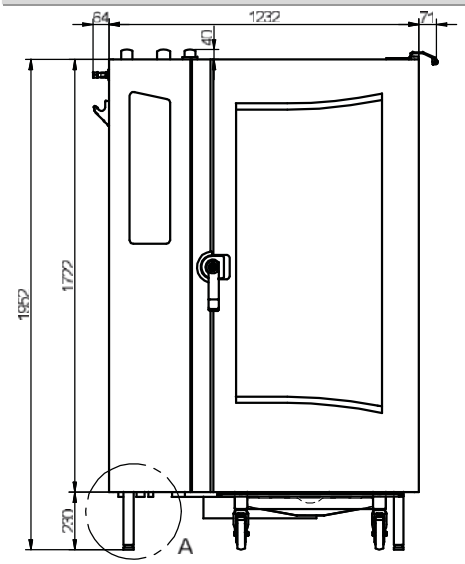


Meaning of labeled elements

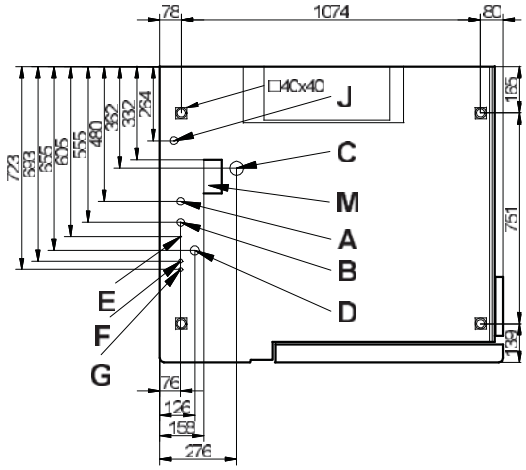
- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **L** Flue gas pipe, gas (steam generator)
- **M** Overflow 120 x 65

OGB 20.20

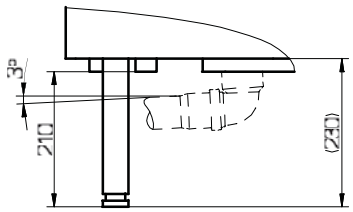
View



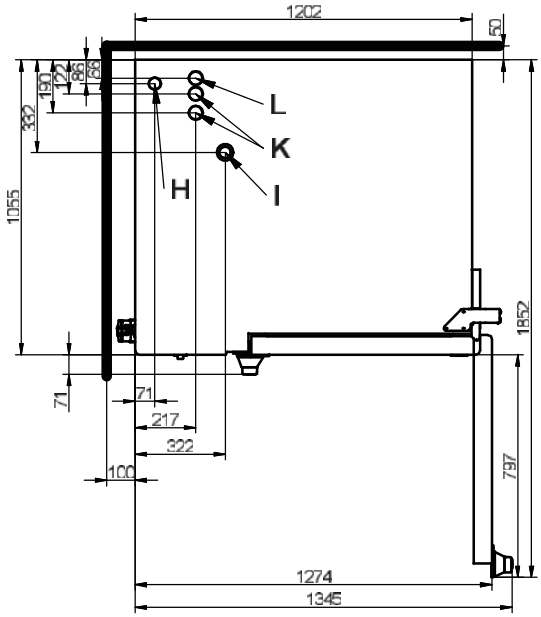
Connections on the underside



Detail A: Water drain



View from above with wall clearances



Meaning of labeled elements

- **A** Soft water connection G3/4"
- **B** Cold water connection G3/4"
- **C** Drain connection DN50
- **D** Electrical supply
- **E** Potential equalization
- **F** Rinse agent connection
- **G** Cleaning agent connection
- **H** Ventilation pipe
- **I** Low-pressure failsafe device
- **J** Gas supply
- **K** Flue gas pipe, gas (convection heater)
- **L** Flue gas pipe, gas (steam generator)
- **M** Overflow 120 x 65

9 Checklists and completion of installation

Purpose of this chapter

This chapter contains the installation checklists and instructions for the user. The checklists are used to prove that the combi steamer has been installed correctly.

Contents

This chapter includes the following topics:

	Page
Checklist: installation	114
Checklist: Safety devices and warnings	117
Checklist: Customer guidance and instruction - safety	118
Checklist: Customer guidance and instruction - operation and maintenance	123
Completion of the installation	124

Checklist: installation

Requirements

The combi steamer has been set up and connected by a qualified person in accordance with the requirements given in this installation manual.

Action

Enter the basic information and check the installation against the checklist.
Check the box of those conditions that have been satisfied.

Basic information

Enter the basic information below.

Location of installed appliance	
Appliance number (as given on type plate)	
Product number (as given on type plate)	

installation

Check the following points and check them off in the boxes.

Requirements for the installation location	Yes
Is the combi steamer set up horizontally?	☐
Can air flow freely around the base of the appliance? The area under the appliance must not be blocked or obstructed by objects.	☐
Are the air-vent and gas-flue pipes completely open and not covered by any objects?	☐
Safety clearances	
Does the minimum distance from the nearest heat source equal 500 mm on all sides of the appliance?	☐
Are deep-fat fryers or cooking appliances that use hot, uncovered fat located at a distance greater than the radius of action of the hand shower?	☐
Electrical supply	**Yes**
Does the electrical safety cut-out at the customer's site comply with local regulations?	☐
Has the customer connected an accessible all-pole disconnection device with a minimum contact separation of 3 mm on the line side close to the appliance?	☐
Is the appliance integrated in a potential equalization system?	☐
Is the appliance protected by a ground fault circuit interrupter with appropriate rated current as stipulated in the relevant installation regulations?	☐
Is the combi steamer protected by its own separate circuit breaker, i.e. the circuit breaker is not shared with other loads?	☐
Have all connecting terminals been checked for a secure connection and tightened if necessary?	☐
Water supply	**Yes**
Is the appliance connected to the drinking water/cold water supply?	☐
Does the water hardness exceed the maximum permitted level?	no ☐ yes ☐
If yes, what corrective steps have been taken:	
Does the flow pressure/water pressure comply with the following specifications:	
Appliance **without** automatic cleaning: Pressure >2 bar and <6 bar, or >200 kPa and <600 kPa?	☐
Appliance **with** automatic cleaning: Pressure >3 bar and <6 bar, or >300 kPa and <600 kPa?	☐
Is a water treatment system installed (hydrogen ion exchanger)?	☐
Has the water drain been installed with an open drain connection?	☐
Is the size of the customer's water drain pipe at least DN 50?	☐
Does the water drain have a slope of at least 5 % or 3° ?	☐
Is there a funnel trap beside the combi steamer?	☐

Is there a funnel trap behind the combi steamer?	☐
Gas supply	**Yes**
Has the gas system and flue system been installed correctly?	☐
Has the gas system and flue system been approved by the registered chimney sweep?	☐
Are there only non-flammable ceilings/materials above the appliance?	☐
installation	**Yes**
Has the protective film been removed from the appliance?	☐

Checklist: Safety devices and warnings

Requirements

The combi steamer has been set up and connected by a qualified person in accordance with the requirements given in this installation manual.

Checklist for safety devices

Check the following safety devices and check them off in the boxes.

Safety device	Yes
Left-hand side cover of the appliance is fitted	☐
Control panel is fitted	☐
Oven door has no scratches, cracks or dents	☐
On-latch position of oven door is working	☐
suction panel is fitted	☐
Electric door sensor for oven door is working	☐
In-Out function of oven door is working	☐
Preheat bridge is fitted	☐

Checklist for warnings

Check that the following warnings are present and check them off in the boxes.

Oven door above the door handle		Yes
	Warning of hot liquids	☐
	Warning of hot steam and vapor	☐
	On CONVOClean system: Warning of corrosive cleaning agents injected into oven	☐
Left-hand side cover of the appliance		**Yes**
	Warning of electric shock	☐
Floor-standing appliances only: Loading trolley		**Yes**
	Warning of hot liquids	☐

Checklist: Customer guidance and instruction - safety

Customer guidance and instruction - safety

Inform the customer of the following operational and safety-related points, checking off the relevant check box as you go:

User manual

Before working with the combi steamer, the user must familiarize himself/herself with the appliance and must have read the user manual, in particular the chapter "For your safety".

Customer has been referred to the chapter "For your safety" in the user manual.	☐

Intended use

Combi steamers must only be used for steaming, stewing, boiling, roasting, braising, baking, scalloping, grilling, gratinating, sous-vide cooking, low-temperature cooking, regenerating and defrosting of foodstuff.

Customer has been advised as to proper use	☐

Improper use

- Operation in a toxic or potentially explosive atmosphere
- Operation at temperatures below +4°C
- Operation outdoors without suitable protection from wind and rain
- Cooking of sealed containers if these are not suitable for this
- Heating flammable materials such as oils, fats, cloths or the like
- Heating items that do not constitute food, apart from suitable accessories

Customer has been advised as to improper use	☐

Risk of explosion

⚠DANGER

Risk of explosion from escaping gas

Escaping gas can ignite and cause an explosion.

If you smell gas, follow the instructions below:

- ▶ Cut off the gas supply immediately.
- ▶ Ventilate the room thoroughly.
- ▶ Avoid creating a spark (e.g. by operating a switch, using a phone or touching electrical switching elements).
- ▶ Tell the gas supplier or even the fire brigade (external telephone).
- ▶ Leave the building together with all other personnel.

Customer has been warned of the risk of explosion	☐

Electric shock

⚠DANGER

Risk of electric shock from live parts

There is a risk of electric shock from touching live parts located under the covers.

- Never open any covers.
- Never remove any covers.
- Disconnect the combi steamer from the power supply outside working hours.

Customer has been warned of the risk of electric shock	☐

Electric shock

⚠DANGER

Risk of electric shock from live parts

Water on the exterior of the combi steamer can cause a short-circuit, which may result in electric shock on touching the combi steamer.

- Do not spray the exterior of the combi steamer with water.
- Protect from rain if operated outdoors.

Customer has been warned of the risk of electric shock	☐

Hot surfaces

⚠WARNING

Risk of burns from high temperatures inside the oven and on the inside of the oven door

You may get burnt if you touch any of the interior parts of the oven, the inside of the oven door or any parts that were inside the oven during cooking.

- Wear personal protective equipment as specified in safety regulations.

Customer has been warned of the risk of burns	☐

Risk of burns

⚠WARNING

Risk of burns if water splashes into hot fat

There is a risk of burns for the operator if water splashes into hot fat.

- Make sure that there are no deep-fat fryers or uncovered pans of fat within the radius of action of the hand shower.
- Follow the instructions given in the section "Requirements for the installation location".

Customer has been warned of the risk of burns	☐

Hot steam

⚠WARNING

Risk of scalding from hot steam

If water is sprayed into the hot oven using the hand shower, steam will be produced that may scald.

- Do not clean until the oven interior has cooled to below 60 °C.

Customer has been warned of the risk of scalding	☐

Hot liquids

⚠WARNING

Risk of scalding from hot liquids

Spilling liquid foods can result in scalds to face and hands.

- Those containers holding liquids or food that will liquefy during cooking must only be placed on shelves that are below a height of 1.60 m, indicated by the warning sign "Hot Liquids" on the appliance or loading trolley. Only these shelves can be seen by all users.
- During loading, make sure that the racks are fixed in place properly.
- Insert the containers correctly into the U-rail of the rack. Do not place containers on the top rail.
- Engage the transport securing mechanism of the shelf rack on the transport trolley.
- During movement, cover containers holding hot liquids.
- Always cover hot liquids when conveying them on the transport trolley or loading trolley.
- Take care not to tilt the transport trolley carrying the shelf rack, or the loading trolley.

Customer has been warned of the risk of scalding	☐

Hot steam / vapor

⚠WARNING

Risk of scalding from hot steam and vapor

Escaping hot steam and vapor can cause scalding to face, hands, feet and legs.

- Open the oven door as specified in the safety regulations and never put your head into the oven.
- For floor-standing appliances, insert the preheat bridge when the loading trolley is not in the combi steamer during preheating.

Customer has been warned of the risk of scalding	☐

Skin and eye irritation

⚠WARNING

Risk of skin and eye irritation

The CONVOClean new and CONVOCare cleaning agents will irritate the skin and eyes if there is any direct contact, and care must be exercised when handling the cleaning canisters.

- Do not inhale the spray mist.
- Do not let CONVOClean new come into contact with eyes or skin.
- Never open the oven door during fully automatic cleaning.
- Wear protective gloves and safety goggles as specified in safety regulations.

Customer has been warned of the risk of skin and eye irritations	☐

Skin burns

⚠WARNING

Risk of skin burns

The CONVOClean forte cleaning agent will cause skin burns if there is any direct contact, and care must be exercised when handling the cleaning canisters.

- Do not inhale the spray mist.
- Do not let CONVOClean forte come into contact with eyes or skin.
- Never open the oven door during fully automatic cleaning.
- Wear protective clothing, protective gloves and safety goggles as specified in safety regulations.

Customer has been warned of the risk of chemical burns to the skin	☐

Risk of crushing

⚠CAUTION

Risk of hand injuries from crushing

When cleaning the oven door and interior door there is the risk that you will crush your hand.

- Take care not to place hand between door and end stop on the right-hand side of the oven door or interior door.

Customer has been warned of the risk of hand injuries	☐

Hand injuries from fan

⚠WARNING

Risk of hand injuries from fan

When the cover is open, there is a risk of hand injuries from the rotating fan in the wiring compartment.

- Disconnect the combi steamer from the power supply before removing the cover.

Customer has been warned of the risk of hand injuries	☐

Contamination risk

⚠WARNING

Risk from microbiological contamination of food

When loading the oven ahead of time, e.g. for pre-setting the start time of the cooking program, the cold chain of chilled foodstuffs may be broken.

- When planning the loading times, always ensure there is no break in the cold chain.

Customer has been warned of the risk of contamination	☐

Cleaning agents coming into contact with food

⚠WARNING

Risk of cleaning agents coming into contact with food

If the CONVOClean and CONVOCare connections are swapped over, there is a health risk from eating the cooked dishes.

- Make sure that CONVOClean and CONVOCare are connected correctly.
- Use only products approved by the manufacturer.

Customer has been warned of the risk of cleaning agents coming into contact with food	☐

Checklist: Customer guidance and instruction - operation and maintenance

Customer guidance and instruction - operation and maintenance

Inform the customer of the following points, checking off the relevant check box as you go:

Operation and maintenance	Yes
Inform the customer that...	
operating personnel must be trained in how to operate the combi steamer and must be taught about the appliance safety devices before starting work.	☐
it is essential to check the combi-steamer safety devices (see the chapter "For your safety" in the user manual).	☐
it is not permitted to fit any combustible materials above the appliance or place them on the appliance.	☐
the gas flue pipe (rear left), its seal and the flue gases are very hot. Hot flue gases and hot sheet metal parts can cause burns.	☐
the combi steamer must only be operated when all safety devices are working correctly.	☐
the combi steamer must only be operated when all equipment covers and panels are fitted correctly.	☐
cleaning and maintenance work needs to be performed. Discuss with the customer the cleaning and maintenance schedule in the user manual.	☐
the annual service of gas components is essential.	☐
CONVOClean cleaning agent only must be used. Otherwise there is a risk of chemical burns to the lungs and skin.	☐
the appliance must not be cleaned with high-pressure cleaners or water jets.	☐
the hand shower must only be used for cleaning inside the oven. Do not spray it onto gas supply connections, ventilation holes or flue gas outlets.	☐
the combi steamer must not be exposed to acids or acid fumes. There is a risk of corroding the stainless steel of the appliance.	☐
the glass plate must be replaced if it suffers surface damage (e.g. scratches, cracks, dents). There is a risk of the glass breaking.	☐

Completion of the installation

Warranty

The warranty does not cover damage resulting from improper setting up, installation, use, cleaning, maintenance, repair or descaling.

Confirmation that appliance is ready for use

The appliance has been installed in accordance with the requirements given in this installation manual.

Date _____

Name of appliance installer (block letters) _____

Signature of appliance installer _____

Confirmation of guidance given to customer

The customer has been informed of important points relating to operation and safety, which have been checked off against the checklist.

Date _____

Name of customer (block letters) _____

Signature of customer _____

Return of documentation

Please return the completed checklist to:

CONVOTHERM Elektrogeräte GmbH
Talstraße 35
82436 Eglfing
Germany

CONVOTHERM

OES OEB OGS OGB

easyTOUCH

6.10 / 6.20 / 10.10 / 10.20 / 12.20 / 20.10 / 20.20

7016721_00 11/08

Subject to technical changes.

CONVOTHERM Elektrogeräte GmbH
Talstraße 35
D-82436 Eglfing

Tel,+49 (0) 8847/67-0
Fax +49 (0) 8847/414
info@convotherm.de

www.convotherm.de